

THE ALGOMA STEEL CORPORATION, LIMITED

ALGOMA STEEL
OFFERING CIRCULAR

**Offer of Rights to
Subscribe for 2,338,225 Common Shares**

Record Date.....November 7, 1980

Expiry Date.....December 1, 1980

Subscription Price.....\$33.00 per Common Share

Subscription Basis.....One (1) additional Common Share for each
five (5) Common Shares held on the Record Date

Approximate Net Proceeds to the Corporation.....\$77 million, after deduction of expenses

October 30, 1980

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To the Shareholders:

Offer

The Algoma Steel Corporation, Limited (the "Corporation" or "Algoma") hereby offers to each holder ("shareholder" or "common shareholder") of its common shares without par value (the "Common Shares") of record at the close of business on November 7, 1980 the right to subscribe for Common Shares in accordance with the terms and conditions of this offer. Each shareholder is entitled to one (1) right for each Common Share held on the record date. Five (5) rights and \$33.00 are required to subscribe for each Common Share. Fractional Common Shares will not be issued. Subscriptions will not be accepted from residents of either the United States or the United Kingdom and this offer is otherwise limited with respect to shareholders outside Canada. (See heading "Shareholders Outside Canada" on page 6).

Agreement To Purchase By Majority Shareholder

Canadian Pacific Enterprises Limited ("Enterprises"), the majority shareholder of the Corporation, has agreed, by letter to the Corporation dated September 23, 1980 (the "Purchase Agreement"), to subscribe and pay for all the Common Shares in respect of which it is issued rights in accordance with the terms and conditions of this offer and to take up and pay for, at the subscription price of \$33.00 per Common Share, all of the Common Shares not subscribed for under rights issued to other shareholders of the Corporation, after giving effect to the additional subscription privilege available to common shareholders. (See heading "Additional Subscription Privilege" on page 5). The head office of Enterprises is located at Suite 1900, Place du Canada, Montreal, Quebec.

Expiry Date

This offer will expire at the close of business on December 1, 1980 at the respective Subscription Offices indicated on page 4 and all outstanding rights will be void after such time.

Proceeds and Purpose of Issue

The approximate net proceeds to be derived by the Corporation is \$77 million after deduction of expenses. Such proceeds will be added to the general corporate funds of the Corporation, which funds will be used to finance a portion of the Corporation's capital expenditure program including a new seamless tube mill described under the heading "Tube Division" on page 12.

Warrants

A fully transferable warrant evidencing the right to subscribe for Common Shares of the Corporation upon the terms and conditions of this offer is enclosed herewith for all shareholders of record residing in Canada. (See heading "Shareholders Outside Canada" on page 6 for limitations on rights offered to shareholders outside Canada). The warrant shows the number of rights to which the holder of Common Shares of record is entitled, on the basis of one (1) right in respect of each Common Share held.

The warrant will be void after December 1, 1980.

The rights may have value and it is expected that they will be traded on The Toronto, Vancouver and Montreal Stock Exchanges until shortly before their expiry date.

A shareholder to whom a warrant is issued or his transferee or assignee (other than shareholders, transferees or assignees resident in either the United States or the United Kingdom) is entitled to subscribe for the number of Common Shares of the Corporation calculated by dividing the number of rights evidenced by the warrant (and any other like warrants received or acquired by such person) by five (5), at a price of \$33.00 per Common Share, upon and subject to the terms and conditions set forth herein.

The Corporation's offer of Common Shares may be accepted only by completing the warrant in accordance with the instructions on page 4. No subscription for a fraction of a Common Share will be accepted.

The warrant does not entitle the holder to any claim whatsoever as a shareholder of the Corporation.

Subscription Offices

Montreal Trust Company (the "Subscription Agent") at each of the following Canadian offices (the "Subscription Offices") has been appointed the Corporation's Subscription Agent to perform the services described under the heading "Services of Subscription Agent" on page 6.

Montreal Trust Company
15 King Street West
Toronto, Ontario
M5H 1B5

Montreal Trust Company
777 Dorchester Blvd. West
P.O. Box 1900, Station "B"
Montreal, Quebec
H3B 3L6

Montreal Trust Company
221 Portage Avenue
P.O. Box 369
Winnipeg, Manitoba
R3C 2S1

Montreal Trust Company
466 Howe Street
Vancouver, British Columbia
V6C 2A8

Montreal Trust Company
P.O. Box 100
61 King Street
Saint John, New Brunswick
E2L 3X7

Montreal Trust Company
411 8th Avenue S.W.
Calgary, Alberta
T2P 1E7

Montreal Trust Company
P.O. Box 4500, Midtown Centre
1908 11th Avenue
Regina, Saskatchewan
S4P 3W7

How to Use the Warrant

By completing the appropriate Form(s) on the warrant in accordance with the instructions outlined below, a holder of a warrant may subscribe for Common Shares and sell any excess rights (Form 1); purchase additional rights to round out the subscription (Form 2); apply to purchase additional Common Shares (Form 3); transfer or sell rights (Form 4); and divide or combine the warrant (Form 5).

To Subscribe

To determine the maximum whole number of Common Shares for which subscription may be made under the warrant, divide the number of rights evidenced by the warrant by five (5).

The subscriber may subscribe for the resulting whole number of Common Shares (ignoring fractions) or any lesser whole number of Common Shares by duly completing Form 1 on the warrant and forwarding the warrant and payment of \$33.00 for each Common Share subscribed for to reach one of the Subscription Offices prior to the close of its business on December 1, 1980. By doing the above, the subscriber authorizes the Subscription Agent to endeavour to sell for the account of the subscriber any rights which are not exhausted by his subscription for Common Shares.

If the result of dividing the number of rights evidenced by the warrant by five (5) is not a whole number, the subscriber may subscribe for the nearest higher whole number of Common Shares by duly completing Form 1 and Form 2 on the warrant and forwarding the warrant and payment of \$33.00 for each Common Share subscribed for to reach one of the Subscription Offices prior to the close of its business on December 1, 1980. By doing the above, the subscriber authorizes the Subscription Agent to endeavour to purchase on behalf of the subscriber up to four (4) rights at the prevailing market price in order to round out the subscription for the whole number of Common Shares. The Subscription Agent will send to the subscriber an account for rights purchased, making due provision for any applicable brokerage commission.

Execution of Form 1 will constitute a representation to the Corporation that the subscriber is not a person resident in either the United Kingdom, its territories or possessions, or the United States of America, its territories or possessions or the agent of any such person.

If mail is used for delivery of a subscription, for the protection of the subscriber, registered mail should be used and sufficient time should be allowed to avoid the risk of late delivery.

Certificates representing Common Shares subscribed or applied for in accordance with this offer will be delivered as soon as practicable by first class mail to the address of the subscriber appearing in the records of the Corporation or to such other address as the subscriber may specify in writing on the subscription form.

The subscription price is payable in Canadian funds by certified cheque, bank draft or money order drawn to the order of Montreal Trust Company. All payments must be forwarded, together with the completed warrant, to one of the Subscription Offices indicated on page 4. The entire subscription price for Common Shares subscribed for upon completion of Form 1 and Form 2 must be paid at the time of subscription.

Additional Subscription Privilege

Each holder of a warrant who has subscribed for all or any part of the Common Shares by completing Form 1 of the warrant is offered the right to make application for additional Common Shares, if available, up to but not exceeding the number of Common Shares which he subscribed for by completing Form 1 of the warrant, at the price of \$33.00 for each additional Common Share. The number of Common Shares available for this purpose will be the difference, if any, between 2,338,225 Common Shares and the total number of Common Shares subscribed for at the date the rights offering expires. Applications for additional Common Shares will be received on an allotment basis only so that the number of additional Common Shares, if any, which may be allotted to each applicant will be on a pro rata basis.

To apply for additional Common Shares, warrant holders must complete Form 1 as well as Form 3 on the warrant and forward the warrant in time to reach one of the Subscription Offices prior to the close of its business on December 1, 1980. Applicants for additional Common Shares will be notified as soon as possible after December 1, 1980 of the number of additional Common Shares, if any, allotted to them and the amount required in payment therefor.

Although payment must accompany the subscription for Common Shares made by completing Form 1, no payment for additional Common Shares should accompany an application for additional Common Shares.

Sale or Transfer of Rights

Shareholders in Canada may, instead of exercising their rights to subscribe for Common Shares, sell or transfer their rights personally, through the usual investment channels (such as brokers or investment dealers), or through the Subscription Agent (Form 4), or as discussed above, if exercising part of their rights, may sell the balance through the Subscription Agent (Form 1). If a warrant is transferred in blank, the Corporation and the Subscription Agent may thereafter treat the bearer thereof as the absolute owner for all purposes and neither the Corporation nor the Subscription Agent shall be affected by notice to the contrary.

To Divide or Combine Warrants

The warrant may be divided or combined with other warrants by duly completing Form 5 and forwarding the applicable warrant(s) to reach one of the Subscription Offices in ample time for new warrant(s) to be issued and used.

A holder may obtain a new warrant by surrendering the warrant to one of the Subscription Offices in ample time for a new warrant to be issued and used.

Signatures

When signing any one or more of the Forms on the warrant, the signature must correspond exactly with the name of the warrant holder shown on the face of the warrant.

If the warrant is transferred (Form 4), the signature of the transferee on any one or more of the Forms on the warrant must correspond exactly with the name of the transferee shown on Form 4. Such transferee may exercise all rights of a warrant holder without obtaining a new warrant.

The transferor's signature on Form 4 must be guaranteed by a Canadian chartered bank, or member of The Toronto or Montreal Stock Exchange, or otherwise guaranteed to the satisfaction of the Subscription Agent.

If a Form is signed by a trustee, executor, administrator, tutor, curator, guardian, attorney, officer of a corporation or any person acting in a fiduciary or representative capacity, the warrant should be accompanied by satisfactory evidence of authority.

Services of Subscription Agent

The Corporation will pay for all services of the Subscription Agent relating to the purchase, sale or exercise of rights, applications for additional Common Shares, the division of warrants and the issue of new warrants without charge to the warrant holder by the Subscription Agent. The Corporation will not pay any other fees or service charges of the warrant holder. A purchase or sale of rights will be subject to the ability of the Subscription Agent to find a seller or purchaser of rights, as the case may be. The Subscription Agent may offset buying and selling orders on the basis of market price. The Subscription Agent will send an account for rights purchased or a remittance for rights sold, as the case may be, making due provision for any applicable brokerage commission.

Shareholders Outside Canada

WARRANTS WILL NOT BE FORWARDED TO ANY SHAREHOLDERS WHOSE RECORDED ADDRESS IS OUTSIDE CANADA. Such shareholders will be sent a letter by airmail advising that their warrants will be held by the Subscription Agent in Toronto, Ontario, Canada, for the account of such shareholders, who will benefit as follows:

United States Shareholders and United Kingdom Shareholders

The Common Shares of the Corporation to which this offer relates are not registered under the Securities Act of 1933, as amended, of the United States of America. This offer of Common Shares of the Corporation is made in Canada and elsewhere and not in the United States of America or any territory or possession thereof. This offer is not, and under no circumstances is to be construed as, an offering of any Common Shares for sale in the United States of America or any territory or possession thereof or an offering to any resident of the United States of America or any territory or possession thereof or a solicitation therein of any offer to buy any Common Shares of the Corporation. Accordingly, neither a subscription nor an application for additional Common Shares will be accepted from any person, or his agent, who appears to be, or who the Corporation has reason to believe is, a resident of the United States of America or its territories or possessions (a "United States Shareholder").

This offer has not been registered with the Registrar of Companies in the United Kingdom. This offer of Common Shares of the Corporation is made in Canada and elsewhere and not in the United Kingdom or any territory or possession thereof. This offer is not, and under no circumstances, is to be construed as, an offering of any Common Shares for sale in the United Kingdom or any territory or possession thereof or an offering to any resident of the United Kingdom or any territory or possession thereof or a solicitation therein of any offer to buy any Common Shares of the Corporation. Accordingly, neither a subscription nor an application for additional Common Shares will be accepted from any person, or his agent, who appears to be, or who the Corporation has reason to believe is, a resident of the United Kingdom or its territories or possessions (a "United Kingdom Shareholder").

The Subscription Agent is instructed to make sales only in Canada and only to persons who are not resident of either the United States or the United Kingdom.

The Subscription Agent, in Toronto, Ontario, Canada, for the account of the United States Shareholders and United Kingdom Shareholders will, prior to December 1, 1980, attempt to sell the rights allocable to each United States Shareholder and to each United Kingdom Shareholder and evidenced by warrants in the possession of the Subscription Agent. The Subscription Agent will make such sales from a pool consisting of such rights allocable to each United States Shareholder and to each United Kingdom Shareholder on the date or dates and at the price or prices it determines in its discretion. Any proceeds received by the Subscription Agent with respect to such rights will be divided on a pro rata basis among such United States Shareholders and United Kingdom Shareholders and delivered by mailing cheques of the Subscription Agent therefor as soon as practicable to such United States Shareholders at their addresses and United Kingdom Shareholders at their addresses recorded in the books of the Corporation.

Certain Foreign Shareholders and Undeliverable Warrants

Shareholders whose recorded addresses are outside of Canada, other than United States Shareholders and United Kingdom Shareholders, will be permitted to subscribe for Common Shares and to apply to purchase additional Common Shares pursuant to the terms of this offer or, if they do not wish to exercise any of their rights to subscribe for Common Shares, will be permitted to sell or otherwise transfer their rights, by instructing the Subscription Agent in writing at its Toronto Office prior to 4:00 p.m. EST on November 28, 1980, as to the exercise, sale or other disposition of their rights. Written instructions may be given to the Subscription Agent either in the form of a letter or by means of telegraph or telex. If such instructions have not been received by the Subscription Agent from such shareholders as aforesaid, then, as soon as practicable after November 28, 1980, all such rights will be sold. Such sales will be made on the date or dates and at the price or prices determined by the Subscription Agent in its discretion. Any proceeds received by said agent with respect to such unexercised rights will be divided on a pro rata basis among the said shareholders outside Canada who did not exercise their rights and will be delivered by mailing cheques of the Subscription Agent therefor as soon as practicable to such shareholders at their addresses recorded in the books of the Corporation. In like manner, any warrants returned to the Subscription Agent as undeliverable will be sold and the net proceeds held by the Subscription Agent for the account of the shareholders whose warrants were undeliverable.

Canadian Federal Income Tax Considerations

The Department of National Revenue of Canada ("Department") has issued Interpretation Bulletin IT-116R dated September 15, 1975 setting forth its views on the applicability of certain sections of the Income Tax Act (Canada) to an offering such as this one. Based on the Interpretation Bulletin it is the Department's position that:

- (i) the value of any rights received by any shareholder resident in Canada pursuant to this offer will not be included in income for income tax purposes;
- (ii) the value of any rights received by any shareholder not resident in Canada will not be subject to any Canadian withholding tax;
- (iii) a right received by a shareholder resident in Canada pursuant to this offer will have a cost of nil, and any Common Share of the Corporation acquired by such shareholder as a result of the exercise of such right will have, subject to the paragraph following subparagraph (v) below, a cost equal to the subscription price;
- (iv) any gain realized on the disposition of a right of any shareholder resident in Canada who is a trader or dealer in securities will be included in the computation of his income; and
- (v) any gain realized on the disposition of a right by any shareholder resident in Canada who is not a trader or dealer in securities will constitute a capital gain one-half of which will be included in the computation of his income.

Any Common Shares of the Corporation acquired by a shareholder who is not a trader or dealer in securities, pursuant to this offer, will be regarded as identical to all other Common Shares of the Corporation acquired by that shareholder after December 31, 1971. In determining any capital gain or loss for income tax purposes upon a subsequent disposition of any such identical Common Shares, the cost will be computed by dividing the total cost of all such identical Common Shares by the total number of such identical Common Shares owned immediately before the disposition. Common Shares of the Corporation acquired by a shareholder who is not a trader or dealer in securities, before January 1, 1972 and still owned by that shareholder, if any, will be regarded as a separate pool of Common Shares and will not be included in determining the cost of any Common Shares acquired pursuant to this offer.

The foregoing is a summary of the general Canadian federal income tax considerations relevant to holders of Common Shares of the Corporation. It is not intended to be exhaustive and shareholders should consult their own professional advisers regarding income tax considerations applicable to them.

Description of Shares

The authorized capital of the Corporation includes 30,186,704 Common Shares of which 11,691,128 are currently issued and outstanding. The holders of the Common Shares are entitled to one vote per Common Share at all meetings of common shareholders. All Common Shares outstanding on completion of this issue will be fully paid and non-assessable and will rank equally in respect of dividend payments and upon winding-up or dissolution of the Corporation. Upon payment in full as herein provided for Common Shares, a shareholder will have no further liability to the Corporation, or otherwise, as a shareholder. (See Note 10 to the Consolidated Financial Statements of the Corporation on page 26 for a description of the preference shares of the Corporation).

Application has been made to list the Common Shares to be issued pursuant to this offer on The Toronto, Vancouver and Montreal Stock Exchanges.

The Corporation

By letters patent of amalgamation dated October 1, 1960, Algoma Steel Corporation, Limited was amalgamated with two of its wholly-owned subsidiaries, Algoma Ore Properties, Limited and Canadian Furnace Co. Limited, to continue as one company under the name The Algoma Steel Corporation, Limited. Algoma Steel Corporation, Limited was incorporated under the laws of the Province of Ontario by letters patent dated December 12, 1934 to acquire all the assets and undertaking of a company of the same name which conducted a business originally established in 1901. The executive and head office of the Corporation is at 503 Queen Street East, Sault Ste. Marie, Ontario.

Consolidated Capitalization

	Authorized	Outstanding on September 30, 1980	Outstanding on November 7, 1980	Outstanding on December 1, 1980 after giving effect to this issue
		(thousands of dollars)		
INDEBTEDNESS				
Long term debt of the Corporation:				
Sinking Fund Debentures				
7¾% Series C due October 1, 1987.....	\$30,000	\$16,754	\$16,754	\$16,754
8¾% Series D due March 31, 1991.....	34,000	29,450	29,450	29,450
10¾% Series E due June 1, 1994	50,000	44,000	44,000	44,000
11% Series F due May 1, 1995....	65,000	61,700	61,700	61,700
Income Debentures				
Floating rate Series G due February 15, 1999 (1).....	60,000	60,000	60,000	60,000
Floating rate Series I due March 31, 1994 (2).....	40,000(US)	46,880	46,880	46,880
Long term debt of Subsidiaries:				
Maple Meadow Mining Company				
9.65% note due January 15, 2000 (3).....	35,000(US)	35,000	35,000	35,000
CAPITAL STOCK (4)				
Preference shares \$25 par value issuable in series.....	7,893,400 shs. (\$197,335)			
Series A(5).....		2,293,400 shs. (\$57,335)	2,279,500 shs. (\$56,988)	2,271,200 shs. (\$56,780)
Series C.....		2,000,000 shs. (\$50,000)	2,000,000 shs. (\$50,000)	2,000,000 shs. (\$50,000)
Series D.....		1,200,000 shs. (\$30,000)	1,200,000 shs. (\$30,000)	1,200,000 shs. (\$30,000)
Common Shares of no par value(6) .	30,186,704 shs.	11,691,128 shs. (\$12,378)	11,691,128 shs. (\$12,378)	14,029,353 shs. (\$89,539)

NOTES:

- (1) Series G Income Debentures bear interest at 1 $\frac{1}{8}$ % over one-half of the mean prime Canadian commercial bank lending rate. Reference is made to Note 8 to the consolidated financial statements on page 25 for additional details of these debentures.
- (2) The \$40,000,000 indebtedness in United States dollars secured by Series I Income Debentures has been translated into Canadian dollars at the exchange rate on March 15, 1979, the date of issue. These debentures bear interest which varies from 1 $\frac{1}{4}$ % to 1 $\frac{1}{2}$ % over one-half of the London Interbank Eurodollar Market Rate (LIBOR) or, at the option of the Corporation, from 1% to 1 $\frac{1}{4}$ % over one-half of the minimum United States commercial bank lending rate. The debentures are convertible, at the option of the Corporation, into a Canadian currency obligation bearing interest which varies from 1% to 1 $\frac{1}{4}$ % over one-half of the mean prime Canadian commercial bank lending rate. Reference is made to Note 8 to the consolidated financial statements on page 25 for additional details of these debentures.
- (3) This amount has been translated from United States dollars to Canadian dollars at par of exchange. The amount of this U.S. indebtedness translated into Canadian dollars at the exchange rate in effect at the date of its issue was \$40,985 thousand.
- (4) Reference is made to Note 10 to the consolidated financial statements on page 26 for details of capital stock. In addition to the stated dollar value for capital stock as indicated above, the Corporation has consolidated retained earnings of \$616,298,000 at September 30, 1980.
- (5) The amounts shown as outstanding on November 7, 1980 and December 1, 1980 are after deduction of estimated open market purchases to be made after October 27, 1980 to each of those dates.
- (6) 2,338,225 Common Shares without par value of the Corporation have been reserved for issue under this offering.
- (7) Reference is made to Note 7 to the consolidated financial statements on page 24 for particulars of long term leases.

Business of the Corporation

Algoma is a vertically integrated primary iron and steel producer which obtains about 95% of its iron ore and over 95% of its coal requirements from properties which it owns, leases or in which it has an interest. Annual raw steel production capacity is approximately 4.0 million tons. Algoma currently has the capability to process 3.7 million tons of raw steel into 2.7 million tons of finished steel products annually. Capital expenditures on facilities currently planned or in progress will provide the capability to process 4.0 million tons of raw steel into 3.0 million tons of finished steel products annually by 1985.

Raw steel production and shipments of steel products for each of the last five years are set out below.

	Production (net tons)	Shipments (net tons)
1979.....	3,528,000	2,597,000
1978.....	3,317,000	2,456,000
1977.....	2,974,000	2,201,000
1976.....	2,888,000	2,036,000
1975.....	2,748,000	1,968,000

The difference between amounts of production and shipments consists largely of scrap which normally results from a steel processing operation and which is recycled. Algoma is self-sufficient in scrap and as such is not affected by fluctuations in scrap prices.

The Canadian operations of Algoma comprise four divisions: the Algoma Ore Division which mines and beneficiates iron ore at Wawa, Ontario; the Steelworks Division which operates a primary iron and steel plant at Sault Ste. Marie, Ontario; the Tube Division which produces seamless tubes at Sault Ste. Marie, Ontario; and the Canadian Furnace Division which produces pig iron at Port Colborne, Ontario, but which has been shut down since March, 1977 due to a reduced demand for pig iron.

Algoma obtains the majority of its iron ore from its 30% participation in the Tilden Mine located in northern Michigan and its own mine at Wawa, Ontario. Coal supplies are almost entirely provided by wholly-owned subsidiaries which produce high and low volatile metallurgical coal from properties located in West Virginia.

Raw Materials

Iron Ore Mining Operations and Reserves

About 95% of the iron ore used in Algoma's operations is supplied from the Algoma Ore Division at Wawa, Ontario and from the Tilden Mine in Michigan.

The Algoma Ore Division operates the George W. MacLeod underground mine near Wawa, 140 miles north of Sault Ste. Marie. The ore mined is siderite, an iron carbonate, containing approximately 35% iron and 2% manganese. Limestone is added to the siderite ore to produce a superflux sinter thereby reducing the fuel requirements for, and increasing the productivity of, Algoma's blast furnaces. Beneficiating and sintering processes at Wawa produce a uniform-size material known as Algoma Sinter containing approximately 48% iron and 2.5% manganese. Production capacity is approximately 2 million gross tons of sinter annually and all of the production is shipped by rail to the Steelworks Division where it is used in the blast furnaces. In 1979, production commenced from a \$36 million downward extension of the MacLeod mine which provides for deeper underground mining and ensures the continued production of Algoma Sinter at an annual rate of 2 million gross tons for approximately 25 years.

Algoma's subsidiary, Cannelton Iron Ore Company ("Cannelton Iron") owns a 30% equity interest in the Tilden Mine through its participation in the Tilden Iron Ore Partnership. The Tilden Mine recovers ore from an extensive fine-grain hematite iron ore property in northern Michigan, approximately 160 miles by water from Sault Ste. Marie. The ore body is leased and the mine, together with the concentrator, pellet plant and related facilities which have been constructed at the mine site, is operated as a joint venture (the "Tilden Mine Joint Venture"). The rated annual capacity of this mine is 8 million gross tons of iron ore pellets containing approximately 65% iron, of which Algoma is entitled to receive 30% amounting to 2.4 million gross tons per annum. The Tilden Mine reserves are sufficient to provide ore for over 30 years of pellet production at current capacity of 8 million gross tons.

Tilden Iron Ore Partnership and the other joint venture partner have borrowed a substantial portion of the required funds for the development and expansion of the Tilden Mine. Cannelton Iron is committed to pay its 30% share of the operating costs of the joint venture and its share of any principal and interest payments on the borrowings made by the Tilden Iron Ore Partnership. Algoma has guaranteed the obligations of Cannelton Iron.

Algoma has carried on extensive exploration, research and evaluation work on certain undeveloped iron ore properties in northwestern Ontario which it owns, leases or in which it has an interest. The Corporation plans to carry on additional work on these properties which could become important future sources of raw material supply.

Purchased Iron Ore Pellets

To supplement the supply of iron ore from captive sources and to minimize the need for open market purchases, the Corporation purchases iron ore pellets under a long term contract from another participant in the Tilden Iron Ore Partnership. Under this contract approximately 600,000 gross tons of pellets are available annually to Algoma when the Tilden Mine is operating at its rated capacity. The Corporation also has entered into a contract with a supplier under which it will purchase a specified tonnage of iron ore pellets not exceeding 500,000 gross tons annually up to the end of 1982. This contract will continue from year to year after 1982 unless terminated by either Algoma or the supplier.

Coal Mining Operations and Reserves

The Corporation's wholly-owned subsidiaries, Cannelton Industries, Inc. ("Cannelton Industries") and Maple Meadow Mining Company ("Maple Meadow"), currently supply over 95% of Algoma's coal requirements. All of the coal reserves and coal mining operations of Cannelton Industries and Maple Meadow are located in West Virginia.

Both high and low volatile metallurgical coals are mined and a blend of these is necessary to produce coke of the quality desirable for Algoma's blast furnaces. The annual capacity for the production of high volatile coal is approximately 1.9 million tons, and in 1979 1.6 million tons were produced. The annual capacity for the production of low volatile coal is 1.1 million tons and approximately this tonnage was produced in 1979.

Cannelton Industries' annual capacity for the production of approximately 1.9 million tons of high volatile coal consists of the production from the Kanawha Division of approximately 1.1 million tons and from the Indian Creek Division of 800,000 tons. The latter capacity was attained with the completion of a new \$14 million preparation plant in August, 1980. With the addition of this facility, Cannelton Industries has the capability of supplying the Corporation's total requirements for high volatile coal.

Production commenced in late 1974 from the new low volatile coal mine developed by Maple Meadow. Based on current annual production levels of approximately 650,000 tons per year and future planned mining rates of approximately one million tons per year, low volatile coal production from this mine exceeds the Corporation's requirements. Shipments commenced in 1976 under a 12-year contract under which a total of 5 million tons of coal from this mine is being sold.

In recent years, a program was undertaken to recover additional reserves at the Pocahontas low volatile coal mines of Cannelton Industries and the plant facilities were upgraded to improve coal quality. Current production capacity is approximately 450,000 tons per year.

Metallurgical coal reserves owned or leased by subsidiaries of the Corporation are estimated to exceed 135 million tons of high volatile coal and 48 million tons of low volatile coal. These reserves are sufficient to permit the mining of coal at current and projected levels of operations for more than 30 years.

Cannelton Industries also has substantial undeveloped reserves of steam coal which are not required in Algoma's operations. Potential development of these reserves is presently being evaluated and test mining is planned. In addition, during the normal course of metallurgical coal mining operation, steam coal is produced, and in 1979 approximately 130,000 tons of this steam coal were produced and sold.

Other

Cannelton Industries also owns approximately 1,250 acres of limestone and dolomite deposits which are being held in reserve in northern Michigan about 60 miles south of Sault Ste. Marie.

Manufacturing Facilities

Steelworks Division

The Steelworks Division plant at Sault Ste. Marie is located on approximately 2,800 acres of land, with about four miles of water frontage on the St. Mary's River, west of the locks between Lake Superior and Lake Huron. More than half of this acreage is available for future expansion. The Sault Ste. Marie facilities comprise coke ovens, blast furnaces, basic oxygen steelmaking furnaces, continuous casting and primary and secondary rolling mills producing a wide range of steel products.

All raw steel is produced by the basic oxygen steelmaking process. With the completion of a new continuous slab casting facility in 1979, the Corporation achieved the capability of processing approximately 4.0 million tons of raw steel into semi-finished steel products. The completion of a new plate heat treating facility and the expansion of the capacity of the rail and structural mill in 1981 along with the installation of an additional plate and strip slab heating furnace and a "coil box" on the 106-inch mill in 1982 will enable Algoma to substantially increase finished steel production capacity as well as improve its efficiency and product quality.

Tube Division

The Tube Division operates a leased plant, located adjacent to the Steelworks Division, which produces seamless tubes used primarily for casing in oil and gas drilling operations. The lease expires in 1986 and contains annual options to purchase. A second smaller plant owned and operated by a subsidiary, located in Michigan near Sault Ste. Marie, finishes and tests a large percentage of tubes manufactured for United States customers.

Completion of a new heat treating facility at the Tube Division in early 1980 has enabled Algoma to double its capacity to produce high-strength seamless tubes. Current drilling operations in North America are at record levels and with the trend to deeper wells and the need to meet the demands of severe drilling conditions, there has been an increased demand by the oil and gas industry for this higher quality product.

On September 24, 1980, Algoma's Board of Directors approved the construction of a new seamless tube mill which will be capable of producing product to include casing, tubing and drill pipe in a size range from 1.9" to 7" diameter. This new facility will be located immediately adjacent to the existing tube mill which produces seamless tubes in a size range from 4.5" to 12.75" diameter. The new mill, estimated at an installed cost of \$300 million, will have a construction period of approximately three years commencing in early 1981. Detailed contractual arrangements for construction of the new tube mill will be finalized by the end of 1980.

In addition to the estimated \$77 million to be raised by the sale of Common Shares pursuant to this rights offering, Algoma has arranged other financing for the new tube mill. Subject to completion of definitive agreements, commitments have been received from three Canadian chartered banks to lend up to \$250 million for the construction of the new tube mill. After start up of the new tube mill these loans will be convertible, at Algoma's option, into 10 year term loans with prepayment privileges.

Canadian Furnace Division

This Division's plant is located at Port Colborne, Ontario, at the south entrance to the Welland Canal. It consists of a blast furnace and pig cast facilities with an annual production capacity of approximately 240,000 tons of standard and specialty merchant pig iron. The plant was shut down in March 1977 for an indefinite period due to weak demand for merchant pig iron. Market conditions have not improved and studies are in progress to determine future plans for this plant.

Products, Sales and Marketing

The following products are produced and sold by Algoma—ingots, billets, slabs and other semi-finished products, unfinished stampings, heavy and light rails, rail fastenings, wide flange shapes, heavy standard structurals, light structurals, carbon merchant bars, reinforcing bars, grinding balls and rods, seamless tubes, hot rolled plate, hot and cold rolled sheet and strip, pig iron, coal, coke and coal chemicals.

Since the mid-1960's, an on-going plan to expand and modernize manufacturing facilities and to diversify products has served to broaden the Corporation's product range and markets considerably with the result that flexibility has been provided in shifting from one product line to another in response to changes in demand for rolled steel products in the North American steel market. A new continuous slab casting facility and the expansion of seamless tube heat treating capacity together with the planned commencement of operations in the first half of 1981 of a new facility to produce quenched and tempered and normalized plate will enable Algoma to respond to growing market demands for more specialized products. The following table summarizes Algoma's distribution of steel shipments by major products over the past five years:

	<u>1979</u>	<u>1978</u>	<u>1977</u>	<u>1976</u>	<u>1975</u>
Plate and sheet.....	59%	59%	57%	56%	56%
Structurals and rails.....	26%	25%	25%	27%	28%
Seamless tubes and skelp.....	10%	10%	8%	7%	10%
Other.....	5%	6%	10%	10%	6%
	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>

In recent years, steel products have accounted for over 95% of total consolidated sales with coke, coal, coal chemicals and pig iron accounting for the remainder.

Algoma maintains sales offices in Moncton, Montreal, Toronto, Hamilton, Windsor, Winnipeg, Calgary and Vancouver as well as the main sales office in Sault Ste. Marie. Customers include companies in the construction and steel fabricating, oil and gas, steel service centre, automotive, heavy equipment, pipe and tube, natural resource, agricultural equipment, appliance, railway and transportation industries. A subsidiary of the Corporation also maintains a sales office in Houston, Texas for the sale of seamless tube products to the oil and gas industry in the United States.

Dominion Bridge

Algoma owns approximately 43% of the outstanding common shares of Dominion Bridge Company, Limited ("Dominion Bridge"). On August 15, 1979, Algoma subscribed for and purchased 1,149,206 common shares of Dominion Bridge pursuant to a rights offering by that company. The total investment of \$37.3 million maintained the Corporation's equity ownership of Dominion Bridge.

Dominion Bridge is an important Canadian customer of Algoma and is engaged in the production and rolling of steel; the fabrication and erection of structural steel for buildings, bridges and other structures; the manufacture of industrial cranes, nuclear power plant components, custom machinery, boilers and platework; field construction services; and the warehousing of steel products. Over the last ten years through its subsidiary, AMCA International Corporation, Dominion Bridge has expanded its foreign business mainly in the United States where its principal activities and products include design engineering and construction services, the manufacture of pre-engineered metal building systems, industrial and steel mill cranes, steel mill equipment, heavy material handling equipment, processing and packaging equipment for certain fluid handling industries and construction equipment, electric and gasoline driven chain saws and portable power tools.

In September 1980 Dominion Bridge, through its subsidiary AMCA International Corporation, acquired pursuant to an offer made in August, 1980 approximately 2.8 million common shares of Koehring Company ("Koehring"), equal to approximately 94 per cent of the common shares outstanding, and approximately 503,000 preferred shares of Koehring, equal to approximately 95.5 per cent of the preferred shares outstanding, for an aggregate price of approximately \$141 million (U.S.). Koehring is a manufacturer of construction and industrial equipment and had sales of approximately \$477 million (US) and earnings of approximately \$14 million (US) in 1979.

Consolidated sales and net earnings (before extraordinary items) of Dominion Bridge since 1975 were as follows:

	Nine months ended September 30		Year ended December 31				
	1980	1979	1979	1978	1977	1976	1975
	(millions of dollars)						
Sales.....	\$752	\$730	\$1,104	\$1,010	\$623	\$520	\$459
Net earnings.....	36.5	31.8	62.6	52.4	37.1	28.9	24.2

Research and Technological Improvements

The coal and iron ore mines of Algoma are highly mechanized and the latest technological improvements are continually being adapted to new mining projects. New beneficiation processes are being tested to increase the value of the Corporation's undeveloped iron ore properties.

Algoma has improved productivity and quality through the application of computerized process control systems in the No. 2 basic oxygen steelmaking facility, the 166-inch plate mill, the 106-inch strip mill and the new tube heat treating facility. The No. 7 blast furnace and the new slab casting facility, brought into production in 1975 and 1979 respectively, also make extensive use of computer controls.

Improvements have been achieved in the production and quality of high-strength seamless tubes resulting principally from Algoma's patented tube quenching process.

The Corporation has participated in the development and introduction of high-strength and lighter-weight corrosion-resistant structural steels and low alloy steel products for special uses. During 1979, a new continuous slab casting facility successfully commenced operations and has performed well with excellent product quality being achieved. Algoma is a leader in North America in the continuous casting of heavy blooms for rails, tube rounds and structurals. The British Iron and Steel Research Association and Algoma jointly have patent rights on the continuous casting of shaped sections for rolling into wide flange structural products. A major Japanese steel company now uses this process under licence.

To meet the automotive industry's new safety standards, Algoma has developed "Algoform" low alloy high-strength hot rolled sheet steels which have excellent ductility and can be cold formed into complex parts using conventional press technology. Similar development work continues in cold rolled sheet production.

The installation of the new plate heat treating facility, which is scheduled for completion in early 1981, will enable the Corporation to produce high-strength plate for such diversified applications as pressure vessels, storage tanks and heavy machinery and equipment.

Algoma has successfully developed and introduced a rail containing chromium with improved metallurgical and physical properties to meet the increased needs of the railroad industry for a stronger, more wear-resistant rail. The Corporation is continuing its research with rails containing chromium-vanadium in order to provide the railroad industry with an even better quality rail.

Environmental Protection

Under The Environmental Protection Act, 1971 (Ontario), the Ministry of the Environment is responsible for reviewing and approving the construction, modification and operation of facilities for the purpose of providing for the protection and conservation of the natural environment. Algoma is working closely with the Ministry both in connection with bringing its existing facilities up to current day standards and ensuring that new facilities comply with environmental regulations. It is also co-operating with the environmental authorities in the other jurisdictions where it has facilities.

Expenditures for environmental control have been utilized primarily to reduce undesirable emissions and effluents from cokemaking, ironmaking and steelmaking facilities. Installations recently completed, in the engineering stage or currently under construction include equipment to remove contaminants from coke plant effluents, environmentally improved coke plant charging cars, No. 7 blast furnace cast house emission control, sinter plant gas cleaning precipitator and discharge dust collector, new filters for blast furnace and steelmaking thickener underflow and relocation of thickener overflow discharge. Capital expenditures on environmental control facilities have averaged approximately 5½% of total consolidated capital expenditures during the past five years and the Corporation anticipates capital expenditures for environmental protection during the next five years will average approximately 7½%.

Employee Relations

Algoma currently employs approximately 13,000 people of whom approximately 11,000 are employed at the Steelworks and Tube Divisions in Sault Ste. Marie. The majority of the plant employees are represented by unions, principally the United Steelworkers of America. Employees represented by these unions in Canada are presently covered by a three-year collective agreement which expires July 31, 1981. During 1978 negotiations, a short work stoppage was experienced which interrupted production for ten days.

A three-year collective agreement with the United Mine Workers Union covering the employees in the United States coal mining operations expires on March 27, 1981.

In recent years, Algoma's management and unions have worked closely in identifying common concerns relating to occupational health and safety, industrial hygiene, employee training and incentive bonus plans. Such consultation has resulted in the development of joint management-union committees to participate in various programs to improve working conditions and overcome production problems. This, along with the development of management, supervisory and apprenticeship training programs, has resulted in improved employee relations and increased productivity.

Review of Operating Results

In 1977, consolidated earnings before income taxes and equity earnings amounted to \$5.5 million. In 1978 and 1979, these earnings improved substantially to \$57.7 million and \$120.2 million respectively, reflecting the substantial improvement in demand for the full range of Algoma's products and the absence of operating problems experienced with new equipment in 1976 and 1977. The improvement in the Corporation's steel markets in 1978 and 1979 from the depressed levels which existed during 1976 and 1977 also permitted Algoma to fully utilize previously installed production and processing equipment which resulted in improved operating efficiencies and productivity. These factors, together with product price adjustments, resulted in improved margins and profitability.

Demand for Algoma's steel products remained generally strong through the first half of 1980. While markets for seamless tubes and rails remain strong, the current recession in the North American economy has led to a significant decline in demand for flat rolled products in the third quarter of 1980. As a result of this weakening in market demand, shipments and earnings for the third quarter of 1980 were significantly lower than in either the first or second quarter of this year. A recent improvement in orders for hot and cold rolled sheets particularly from automotive related industries and a continuing strong demand for the Corporation's other major product lines have improved rolled steel order backlogs and are expected to benefit fourth quarter earnings.

During this period of lower demand, Algoma is relining its No. 6 blast furnace and plans to increase inventories of raw and semi-finished steel in anticipation of the scheduled reline of the No. 7 blast furnace in 1981. The No. 5 blast furnace was relined in the early part of 1980. None of these three blast furnaces, with a combined capacity of 10,000 tons of pig iron per day, is expected to require any further major shutdown for reline until the mid 1980's.

Capital Expenditures

The following table shows a yearly breakdown of the Corporation's consolidated capital expenditures which, for the past five years, totalled \$312 million.

	<u>1979</u>	<u>1978</u>	<u>1977</u>	<u>1976</u>	<u>1975</u>
	(millions of dollars)				
Manufacturing plants.....	\$ 65	\$ 24	\$ 15	\$ 34	\$ 84
Raw material properties.....	24	15	15	17	19
Total.....	<u>\$ 89</u>	<u>\$ 39</u>	<u>\$ 30</u>	<u>\$ 51</u>	<u>\$103</u>

Capital expenditures in 1980 are estimated to total approximately \$116 million, of which approximately \$88 million are planned to be spent at the Steelworks Division. The approved capital projects for the next four years total \$472 million of which \$300 million relates to the proposed tube mill described under the heading "Tube Division" on page 12. In addition to the financing now arranged for the new seamless tube mill, the Corporation expects that it will issue, in 1981, additional long term public debt in order to finance its ongoing capital expenditure program.

Directors and Principal Officers

Directors

The Corporation's directors, their municipalities of residence and their principal occupations are as follows:

<u>Name and municipality of residence</u>	<u>Principal occupation</u>
RUSSELL STAFFORD ALLISON..... Willowdale, Ontario	Vice President, Eastern Region, Canadian Pacific Limited
ROBERT DOUGLAS ARMSTRONG..... Don Mills, Ontario	Chairman and Chief Executive Officer, Rio Algom Limited
IAN ALEXANDER GRAY..... North Vancouver, British Columbia	President and Chief Executive Officer, Canadian Pacific Air Lines, Limited
JOHN MACNAMARA..... Sault Ste. Marie, Ontario	President and Chief Executive Officer, The Algoma Steel Corporation, Limited
WILLIAM EARLE McLAUGHLIN..... Westmount, Quebec	Director and Former Chairman, a Canadian Chartered Bank
MAXWELL CHARLES GORDON MEIGHEN, O.B.E..... Toronto, Ontario	Chairman, Canadian General Investments, Limited
ARTHUR HAMMOND MINGAY..... Toronto, Ontario	Chairman, The Canada Trust Company
PAUL AIME NEPVEU..... Montreal, Quebec	Vice Chairman, Canadian Pacific Enterprises Limited
LEONARD NORMAN SAVOIE..... Sault Ste. Marie, Ontario	President and Chief Executive Officer, Algoma Central Railway
WALTER JOHN STENASON..... Beaconsfield, Quebec	President, Canadian Pacific Enterprises Limited
ROBERT JOSEPH THEIS..... Fayetteville, New York	President, Canellus Incorporated
WALTER GEORGE WARD..... Cavan, Ontario	Chairman, The Algoma Steel Corporation, Limited

Principal Officers

The Corporation's principal officers and their municipalities of residence are as follows:

WALTER GEORGE WARD..... Cavan, Ontario	Chairman
JOHN MACNAMARA..... Sault Ste. Marie, Ontario	President and Chief Executive Officer
PETER MARLBOROUGH NIXON..... Sault Ste. Marie, Ontario	Group Vice President — Manufacturing and Mining
JOSEPH DENTON RAND POTTER..... Halifax, Nova Scotia	Group Vice President — Finance and Corporate Services
ROBERT NEIL ROBERTSON..... Sault Ste. Marie, Ontario	Group Vice President — Marketing and Sales
DOUGLAS JOYCE..... Sault Ste. Marie, Ontario	Senior Vice President

<u>Name and municipality of residence</u>	<u>Principal occupation</u>
ROSS HERBERT JAMES CUTMORE..... Goulais River, Ontario	Vice President—Accounting
SAMUEL HORACE ELLENS..... Sault Ste. Marie, Ontario	Vice President—Administration
ROBERT GORDON PATERSON..... Sault Ste. Marie, Ontario	Vice President—Engineering
PATRICK LAWRENCE ROONEY..... Sault Ste. Marie, Ontario	Vice President—Operations
DONALD LLOYD MCEACHERN..... Sault Ste. Marie, Ontario	Assistant Vice President—Sales
HENRY ANTHONY SMITH..... Sault Ste. Marie, Ontario	Secretary and General Counsel
JOSEPH KENNETH LOUIS MORANO(1)..... Sault Ste. Marie, Ontario	Treasurer
WILLIAM JOHN REED..... Sault Ste. Marie, Ontario	Controller—Steel and Iron Ore Operations

Note: (1) Effective June 1, 1980, J. K. L. Morano was appointed Treasurer replacing the former Treasurer who resigned.

Remuneration of Directors and Senior Officers
From Algoma and its wholly-owned subsidiaries(1)

	Remuneration for the year ended December 31, 1979			Future years
	Aggregate remuneration(2)	Cost of pension benefits	Retirement benefits paid	Accrued cost in respect of extra compensation plan(3)
A. Directors (15).....	\$ 109,550	Nil	Nil	Nil
B. Five senior officers.....	878,982	\$104,823	Nil	\$ 631,662
C. Officers receiving over \$50,000 (includes B).....	2,011,513	308,964	\$217,457	1,345,030

	Remuneration for the nine months ended September 30, 1980			Future years
	Aggregate remuneration(2)	Cost of pension benefits	Retirement benefits paid	Accrued cost in respect of extra compensation plan(3)
A. Directors (17).....	\$ 85,750	Nil	Nil	Nil
B. Five senior officers.....	723,123	\$102,046	Nil	\$ 985,468
C. Officers receiving over \$50,000 (includes B).....	\$1,563,574	\$230,090	Nil	\$1,551,661

NOTES:

- (1) The Corporation's partially-owned subsidiaries pay no remuneration to these directors and officers.
- (2) Excludes retirement benefits paid.
- (3) Accrued as at December 31, 1979 and as at September 30, 1980 respectively in respect of the Corporation's Extra Compensation Plan which may become payable in the future on the retirement or termination of employment (other than for cause) or death during employment to certain officers of the Corporation.

Principal Holders of Common Shares

At September 30, 1980, Enterprises, (a subsidiary of Canadian Pacific Limited), owned beneficially, directly or indirectly, approximately 56% of the outstanding Common Shares.

Prior to May 5, 1980, "Canadian Pacific Enterprises Limited" was known as "Canadian Pacific Investments Limited".

At October 1, 1980, the directors and principal officers of Algoma, as a group, beneficially owned, directly or indirectly, less than 1% of Algoma's Common Shares.

To the best of the knowledge and belief of the directors of Algoma, there have been no transfers of Common Shares since the last annual meeting of shareholders, held on April 17, 1980, which have materially affected the control of Algoma.

Material Contracts

Algoma has not entered into any material contracts within the two years preceding the date hereof, other than contracts in the ordinary course of business, except as follows:

1. The Purchase Agreement referred to under the heading "Agreement To Purchase By Majority Shareholder" on page 3.
2. The commitments referred under the heading "Tube Division" on page 12.
3. The agreements dated October 25, 1978 between Algoma and IAC Limited and a Canadian chartered bank providing for the sale of \$60,000,000 principal amount of Floating Rate Income Debentures, Series G.
4. The Fifth Supplemental Trust Indenture dated February 15, 1979 between Algoma and Montreal Trust Company, as Trustee, pursuant to which the Floating Rate Income Debentures, Series G were issued.
5. The agreement dated November 2, 1978 between Algoma and a Canadian chartered bank providing for the sale of \$40,000,000 (US) principal amount of Floating Rate Income Debentures, Series I.
6. The Sixth Supplemental Trust Indenture dated March 15, 1979 between Algoma and Montreal Trust Company, as Trustee, pursuant to which the Floating Rate Income Debentures, Series I were issued.
7. A guarantee of the long term debt of a subsidiary, Maple Meadow Mining Company, referred to in the table on page 9.

Price Range and Trading Volume of Common Shares

The Common Shares of the Corporation are listed on The Toronto, Vancouver and Montreal Stock Exchanges. The following table sets out the reported high and low prices and volumes of trading on The Toronto Stock Exchange as well as the total combined volume of trading of the Common Shares on such stock exchanges for the periods indicated.

Period	The Toronto Stock Exchange			Total Combined Volume
	High	Low	Volume	
October 1 to October 29, 1980.....	\$41½	\$35	85,576	87,466
September, 1980.....	39	34¼	92,247	110,317
August, 1980.....	41⅞	36	191,936	234,057
July, 1980.....	36⅜	31¼	104,016	134,968
Second Quarter, 1980.....	34½	28	216,377	244,187
First Quarter, 1980.....	40½	29½	630,117	675,822
Fourth Quarter, 1979.....	33½	26½	396,613	436,455
Third Quarter, 1979.....	30⅜	26⅞	211,092	257,203
Second Quarter, 1979.....	30½	27½	351,764	472,612
First Quarter, 1979.....	29¼	26¼	361,191	471,243
Fourth Quarter, 1978.....	27½	23½	397,298	448,503
Third Quarter, 1978.....	24¾	20	461,807	578,978
Second Quarter, 1978.....	22	18	313,308	400,961
First Quarter, 1978.....	18⅜	14⅛	479,446	532,460

During the period indicated, trading activity on The Toronto Stock Exchange accounted for approximately 90% of all trading volume of the Common Shares of the Corporation.

Dividend Record

The Corporation has paid dividends on its outstanding shares during the five years ended December 31, 1979 and the nine months ended September 30, 1980 as follows:

	Nine Months ended September 30, 1980	Year ended December 31				
		1979	1978	1977	1976	1975
PREFERENCE SHARES						
Series A						
Per Share.....	\$1.50	\$2.00	\$2.00	\$2.00	\$ 1.26(1)	\$ —
Total Amount (000's)	3,510	4,800	4,800	4,800	3,031	—
Series C						
Per Share.....	1.69	1.83	1.46	.85(2)	—	—
Total Amount (000's)	3,387	3,655	2,928	1,700	—	—
Series D						
Per Share.....	1.67	1.83	1.45	.06(3)	—	—
Total Amount (000's)	2,007	2,193	1,738	72	—	—
COMMON SHARES						
Per Share.....	\$.75	\$.70	\$ —	\$.20(4)	\$ 1.10	\$ 1.40
Total Amount (000's).....	8,769	8,184	—	2,334	12,839	16,338

(1) Series A Preference Shares issued April 23, 1976. Dividend payable from that date.

(2) Series C Preference Shares issued April 29, 1977. Dividend payable from that date.

(3) Series D Preference Shares issued December 15, 1977. Dividend payable from that date.

(4) Represents Common Share dividend for first quarter 1977 only.

Auditors, Transfer Agent and Registrar

The auditors of the Corporation are Peat, Marwick, Mitchell & Co., Chartered Accountants, 421 Bay Street, Sault Ste. Marie, Ontario.

The registrar and transfer agent for the Common Shares of Algoma is Montreal Trust Company at its principal offices in Saint John, Montreal, Toronto, Winnipeg, Regina, Calgary and Vancouver, Canada and The Royal Bank of Canada Trust Company, New York City, New York, U.S.A.

By Order of the Board,



President and Chief Executive Officer

The Algoma Steel Corporation, Limited
Consolidated Earnings and Retained Earnings
(Thousands of Dollars)

	Nine Months Ended September 30		Year ended December 31				
	1980	1979	1979	1978	1977	1976	1975
	(unaudited)						
INCOME							
Sales.....	\$836,214	\$796,297	\$1,081,183	\$864,221	\$687,839	\$584,835	\$541,463
Other.....	2,780	3,359	3,983	661	514	596	385
	<u>838,994</u>	<u>799,656</u>	<u>1,085,166</u>	<u>864,882</u>	<u>688,353</u>	<u>585,431</u>	<u>541,848</u>
EXPENSES							
Cost of products sold.....	689,418	643,945	874,910	727,159	606,816	525,199	460,741
Administrative and selling.....	17,896	16,610	21,890	17,529	14,372	14,145	12,904
Interest and expense on long term debt.....	20,657	20,702	27,643	24,813	22,512	23,081	19,150
Interest on short term loans.....	704	495	634	2,001	5,521	4,239	3,395
Depreciation and amortization....	35,362	29,491	39,889	35,660	33,631	33,036	29,331
	<u>764,037</u>	<u>711,243</u>	<u>964,966</u>	<u>807,162</u>	<u>682,852</u>	<u>599,700</u>	<u>525,521</u>
EARNINGS BEFORE INCOME TAXES AND EQUITY EARNINGS.....	74,957	88,413	120,200	57,720	5,501	(14,269)	16,327
INCOME TAXES (Note 2)							
Current.....	—	—	—	7,500	—	723	430
Deferred.....	22,950	24,897	35,300	3,200	(15,800)	(26,336)	(10,971)
	<u>22,950</u>	<u>24,897</u>	<u>35,300</u>	<u>10,700</u>	<u>(15,800)</u>	<u>(25,613)</u>	<u>(10,541)</u>
EARNINGS BEFORE EQUITY IN EARNINGS OF ASSOCIATED COMPANY AND EXTRAORDINARY ITEMS.....	52,007	63,516	84,900	47,020	21,301	11,344	26,868
EQUITY IN EARNINGS OF ASSOCIATED COMPANY.....	15,607	14,044	27,005	22,596	16,025	12,520	11,247
EARNINGS BEFORE EXTRAORDINARY ITEMS.....	67,614	77,560	111,905	69,616	37,326	23,864	38,115
EXTRAORDINARY ITEMS							
Reduction in income taxes from application of loss carry-forwards	—	—	—	7,500	—	—	—
Gain on sale of lake vessel, after deducting income taxes of \$982.	—	—	—	—	—	—	3,510
Equity in extraordinary gains of associated company.....	—	—	—	—	—	—	1,844
NET EARNINGS.....	<u>\$ 67,614</u>	<u>\$ 77,560</u>	<u>\$ 111,905</u>	<u>\$ 77,116</u>	<u>\$ 37,326</u>	<u>\$ 23,864</u>	<u>\$ 43,469</u>
Provision for dividends on preference shares.....	\$ 8,869	\$ 7,956	\$ 10,722	\$ 9,505	\$ 6,951	\$ 4,032	\$ —
Net earnings applicable to common shares.....	\$ 58,745	\$ 69,604	\$ 101,183	\$ 67,611	\$ 30,375	\$ 19,832	\$ 43,469
EARNINGS PER COMMON SHARE							
Earnings before extraordinary items	\$ 5.02	\$ 5.95	\$ 8.65	\$ 5.15	\$ 2.60	\$ 1.70	\$ 3.27
Net earnings.....	\$ 5.02	\$ 5.95	\$ 8.65	\$ 5.79	\$ 2.60	\$ 1.70	\$ 3.72
RETAINED EARNINGS							
Balance at beginning of period....	\$566,357	\$475,594	\$ 473,284	\$405,634	\$377,643	\$371,923	\$344,792
Net earnings.....	67,614	77,560	111,905	77,116	37,326	23,864	43,469
Dividends paid.....	(17,673)	(13,775)	(18,832)	(9,466)	(9,118)	(16,405)	(16,338)
Expenses relating to issue of preference shares, after deducting income tax credits.....	—	—	—	—	(217)	(1,739)	—
Balance at end of period.....	<u>\$616,298</u>	<u>\$539,379</u>	<u>\$ 566,357</u>	<u>\$473,284</u>	<u>\$405,634</u>	<u>\$377,643</u>	<u>\$371,923</u>

The Algoma Steel Corporation, Limited

Consolidated Financial Position

(Thousands of Dollars)

	September 30, 1980 (unaudited)	December 31 1979	1978
CURRENT ASSETS			
Short term investments at cost (approximates market)	\$ 1,048	\$ 11,807	\$ —
Accounts receivable.....	145,425	139,786	138,186
Inventories (Note 3).....	307,023	278,210	218,765
Prepaid expenses.....	8,087	5,661	5,442
Total current assets.....	<u>461,583</u>	<u>435,464</u>	<u>362,393</u>
CURRENT LIABILITIES			
Bank overdraft.....	15,840	7,030	9,982
Bank loan.....	2,879	—	—
Promissory notes.....	14,000	—	16,130
Accounts payable and accrued.....	120,508	136,619	116,876
Taxes payable.....	6,449	7,207	7,040
Long term debt due within one year.....	—	—	5,450
Total current liabilities.....	<u>159,676</u>	<u>150,856</u>	<u>155,478</u>
WORKING CAPITAL			
Current assets less current liabilities.....	<u>301,907</u>	<u>284,608</u>	<u>206,915</u>
OTHER ASSETS			
Non current accounts receivable.....	2,200	2,200	2,150
Long term investments (Note 4).....	205,182	197,243	134,210
Net fixed assets (Note 5).....	626,422	586,994	549,779
Unamortized debenture expense.....	2,024	2,138	2,291
Total other assets.....	<u>835,828</u>	<u>788,575</u>	<u>688,430</u>
TOTAL INVESTMENT			
Working capital plus other assets.....	<u>1,137,735</u>	<u>1,073,183</u>	<u>895,345</u>
LONG TERM LIABILITIES (Notes 6 and 7)			
Long term debt (Note 8).....	293,784	298,625	248,675
Accrued past service pension cost (Note 9).....	10,832	11,653	12,496
Deferred income taxes.....	67,108	44,357	8,807
Total long term liabilities.....	<u>371,724</u>	<u>354,635</u>	<u>269,978</u>
EXCESS OF TOTAL INVESTMENT OVER LONG TERM LIABILITIES	<u>\$ 766,011</u>	<u>\$ 718,548</u>	<u>\$ 625,367</u>
SHAREHOLDERS' EQUITY			
Capital stock (Note 10)			
Preference shares.....	\$ 137,335	\$ 139,813	\$ 140,000
Common shares.....	12,378	12,378	12,083
Retained earnings.....	616,298	566,357	473,284
Total shareholders' equity.....	<u>\$ 766,011</u>	<u>\$ 718,548</u>	<u>\$ 625,367</u>

Approved on behalf of the Board:

"JOHN MACNAMARA" (signed), Director

"ARTHUR HAMMOND MINGAY" (signed), Director

The Algoma Steel Corporation, Limited
Changes in Consolidated Financial Position
(Thousands of Dollars)

	Nine Months Ended September 30		Year ended December 31				
	1980	1979	1979	1978	1977	1976	1975
	(unaudited)						
SOURCE OF WORKING CAPITAL							
Operations.....							
Earnings before extraordinary items.....	\$ 67,614	\$ 77,560	\$111,905	\$ 69,616	\$ 37,326	\$ 23,864	\$ 38,115
Equity in undistributed earnings of associated company.....	(6,988)	(8,068)	(18,731)	(17,172)	(11,727)	(8,038)	(7,340)
Other items included in earnings not resulting in an outlay or receipt of funds.....	57,058	61,015	87,482	57,060	15,797	3,419	19,115
	117,684	130,507	180,656	109,504	41,396	19,245	49,890
Capital gain on sale of lake vessel, before deducting income taxes of \$982.....	—	—	—	—	—	—	4,492
Proceeds from sale of fixed assets.....	390	3	398	1,043	986	224	1,517
Proceeds from long term loans							
Sale of debentures.....	—	106,880	106,880	—	—	—	63,732
Other long term loans.....	35,000	333	333	3,500	3,500	10,686	31,420
Proceeds from issue of capital stock							
Preference shares.....	—	—	—	—	79,723	57,831	—
Common shares.....	—	295	295	—	—	23	9
Other—net.....	—	(52)	(49)	4,358	(150)	(825)	(1,185)
	153,074	237,966	288,513	118,405	125,455	87,184	149,875
APPLICATION OF WORKING CAPITAL							
Additions to fixed assets							
Manufacturing plants.....	54,845	46,261	65,424	24,253	15,096	33,523	84,086
Raw material properties.....	19,138	15,166	23,844	14,985	14,500	17,033	18,612
	73,983	61,427	89,268	39,238	29,596	50,556	102,698
Long term investments.....	979	42,589	44,420	9,127	5,524	1,085	6,035
Reduction of long term debt.....	39,841	55,304	57,263	6,100	16,463	6,674	3,546
Reduction of accrued past service pension cost	821	814	849	761	824	1,518	(156)
Preference shares purchased for cancellation...	2,478	—	188	—	—	—	—
Dividends.....	17,673	13,775	18,832	9,466	9,118	16,405	16,338
	135,775	173,909	210,820	64,692	61,525	76,238	128,461
WORKING CAPITAL							
Increase.....	17,299	64,057	77,693	53,713	63,930	10,946	21,414
Balance at beginning of period.....	284,608	206,915	206,915	153,202	89,272	78,326	56,912
Balance at end of period.....	\$301,907	\$270,972	\$284,608	\$206,915	\$153,202	\$ 89,272	\$ 78,326

The Algoma Steel Corporation, Limited

Notes to Consolidated Financial Statements

(Information as at September 30, 1980 and for the nine month periods ending September 30, 1980 and 1979 is unaudited)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of all subsidiary companies and significant inter-company transactions are eliminated. Assets, liabilities and results of operations of United States subsidiaries are included assuming \$1 Canadian equal to \$1 United States; if these were translated to the actual Canadian dollar equivalent, using historical rates to translate non-current assets and long term liabilities, there would be no material effect on these financial statements. The investment in the associated company, Dominion Bridge Company, Limited, and in the cost sharing Tilden Mine joint venture producing iron ore pellets are accounted for by the equity method. Minority interests in the capital stock and earnings of subsidiary companies are insignificant and therefore are not accorded separate disclosure.

INVENTORIES

Finished products and work in process are valued at the lower of cost and net realizable value. Raw materials and supplies are valued at the lower of cost and replacement cost.

FIXED ASSETS

Property, plant and equipment are recorded at cost. Expenditures for improvements and renewals which extend economic life and for mine development are capitalized. Maintenance and repairs are charged to earnings as incurred excepting expenditures on periodic relines of blast furnaces which are accrued for in advance on a unit of production basis.

Depreciation of manufacturing plant and equipment is provided on a straight line basis at rates intended to amortize the cost of these assets over their estimated economic lives. Mining equipment and mine development costs are amortized on a unit of production basis over the estimated recoverable iron ore and coal reserves.

Interest incurred on funds borrowed directly to finance the development of new raw material properties is capitalized during the period of construction and initial development. Such interest is included in the charge to earnings for depreciation and amortization when production commences in commercial quantities.

EXPLORATION, RESEARCH AND START UP EXPENSES

Expenses in exploring for raw materials, investigating and holding raw material properties and costs of research and start up of new production facilities are charged to earnings as incurred.

INCOME TAXES

Income taxes are provided for on the deferred tax allocation basis. Since regulations in Canada and the United States permit the deduction of expenses in calculating taxable income which may not correspond with amounts recorded for financial reporting, income taxes charged to earnings may differ from those currently payable. Income taxes charged to earnings, in excess of those currently payable, are shown as deferred income taxes in the financial statements.

Investment tax credits are deducted from income taxes charged to earnings provided there is a reasonable expectation they will be claimed against current taxes payable prior to expiry of the applicable carry-forward period.

2. INCOME TAXES

- (a) The deferred income tax (credits) and debits in the earnings statement result principally from recording a greater amount of depreciation than the amount claimed for tax purposes in 1975, 1976 and 1977 and the reverse in 1978, 1979 and 1980.
- (b) Income tax provisions were reduced by the following amounts by utilization of depletion, resource and inventory allowance deductions in determining income taxes (in millions):

- \$16.7 in 1975
 - 14.6 in 1976
 - 16.6 in 1977
 - 16.4 in 1978
 - 20.8 in 1979
 - 13.9 in 1980 for nine months ended September 30.

- (c) Investment tax credits were utilized to reduce income taxes in the following years (in millions):

- \$1.7 in 1975
 - 1.1 in 1976
 - in 1977
 - in 1978
 - 1.3 in 1979
 - .7 in 1980 for nine months ended September 30.

Unused investment tax credits available for reduction of income taxes in the statement of Earnings for periods between October 1, 1980 and December 31, 1987 amount to \$30.9 million.

3. INVENTORIES

	September 30 1980	December 31	
		1979	1978
	(millions of dollars)		
Finished products.....	\$ 44.4	\$ 42.7	\$ 36.2
Work in process.....	89.8	71.2	56.0
Raw materials and supplies.....	172.8	164.3	126.6
	<u>\$ 307.0</u>	<u>\$ 278.2</u>	<u>\$218.8</u>

4. LONG TERM INVESTMENTS

	September 30 1980	December 31	
		1979	1978
	(millions of dollars)		
Associated company.....	\$ 160.3	\$ 153.3	\$ 97.2
Joint venture.....	42.7	41.9	34.5
Other.....	2.2	2.0	2.5
	<u>\$ 205.2</u>	<u>\$ 197.2</u>	<u>\$134.2</u>

5. FIXED ASSETS

	September 30 1980	December 31	
		1979	1978
	(millions of dollars)		
Property, plant and equipment			
Manufacturing plants.....	\$ 927.9	\$ 873.2	\$816.3
Raw material properties.....	206.5	188.0	169.1
	1,134.4	1,061.2	985.4
Accumulated depreciation, depletion and amortization.....	508.0	474.2	435.6
	<u>\$ 626.4</u>	<u>\$ 587.0</u>	<u>\$549.8</u>

6. COMMITMENTS

- (a) The Corporation, as a participant in an iron ore mining joint venture, is entitled to receive its share of production and is committed to pay its share of costs including minimum charges for principal and interest to cover the servicing of long term debt. The Corporation's share of such minimum charges was \$17.6 million in 1979 and \$17.3 million in the nine months ended September 30, 1980. Future charges will be approximately \$6 million for the remainder of 1980 and will average approximately \$21.5 million annually during the next five years. The aggregate market value of the pellets received by the Corporation exceeded its share of the aggregate costs in 1980 when the mine was producing at its expanded eight million tons annual rated capacity.
- (b) The estimated amount required to complete approved capital projects is \$472 million. These projects are expected to be completed during the next four years. Commitments of \$68 million are outstanding on these projects at September 30, 1980.

7. LONG TERM LEASES

Rentals under long term leases amounted to \$9.8 million in 1979 and \$7.4 million for nine months ended September 30, 1980. Future minimum rentals will aggregate \$77.1 million, will be \$1.7 million for the remainder of 1980 and in each of the next five years will be (in millions of dollars): \$8.1, \$7.4, \$7.3, \$7.3 and \$6.5. These rentals are payable principally under leases of steel processing plant and equipment which contain options to purchase and under leases of raw materials properties.

Certain leases entered into prior to 1979 are deemed to be capital leases but have been accounted for as operating leases pursuant to the transitional provisions of the C.I.C.A. accounting recommendations effective in 1979. If such leases were accounted for as capital leases there would not have been any material effect on net earnings and the leases would be shown in the statement of Financial Position as follows:

	September 30 1980	December 31	
		1979	1978
	(millions of dollars)		
Leased assets which include steel manufacturing equipment, ancillary equipment and motor vessel.....	\$39.0	\$39.2	\$39.5
Accumulated amortization.....	16.8	15.0	12.6
	<u>\$22.2</u>	<u>\$24.2</u>	<u>\$26.9</u>
Obligations relating to these leases			
Current portion.....	\$ 2.6	\$ 2.5	\$ 2.4
Long term obligation.....	23.9	25.7	28.0
	<u>\$26.5</u>	<u>\$28.2</u>	<u>\$30.4</u>

Interest rates implicit in such leases range from approximately 7% to 12% and expiry dates occur between 1980 and 1994.

8. LONG TERM DEBT

	September 30 1980	December 31	
		1979	1978
	(millions of dollars)		
Debentures (a)			
7 $\frac{3}{8}$ % series C maturing 1987	\$ 16.8	\$ 18.0	\$21.6
8 $\frac{3}{4}$ % series D maturing 1991	29.4	30.7	31.4
10 $\frac{3}{8}$ % series E maturing 1994	44.0	48.0	50.0
11 % series F maturing 1995	61.7	63.2	65.0
Floating rate series G maturing 1999 (b)	60.0	60.0	—
Floating rate series I maturing 1994 (b)	46.9	46.9	—
9.65% note maturing 2000 (c)	35.0	—	—
8 $\frac{1}{2}$ % notes maturing 1991 (c)	—	20.5	21.0
Bank loans (c)	—	11.3	11.0
Note maturing 1980	—	—	4.1
Bank loan under revolving credit	—	—	26.1
Short term promissory notes	—	—	23.9
Total amount outstanding	293.8	298.6	254.1
Less due within one year	—	—	5.4
	<u>\$293.8</u>	<u>\$298.6</u>	<u>\$248.7</u>

Sinking fund requirements for years 1980, 1981 and 1982 have been satisfied by purchase of debentures in the open market. Unsatisfied sinking fund and other repayment requirements for each of the next three years are (in millions of dollars) \$9.9, \$12.5 and \$12.5.

- (a) The debentures rank pari passu and are secured by a Trust Indenture containing a first floating charge on all assets of the Corporation in Ontario.
- (b) Series G income debentures bear non-taxable interest at 1 $\frac{1}{8}$ % over one-half of the mean prime Canadian commercial bank lending rate. The Corporation is permitted to convert this obligation into series H debentures bearing taxable interest which varies from $\frac{1}{4}$ % to $\frac{3}{4}$ % over the mean prime Canadian commercial bank lending rate.

Series I income debentures of \$40 million payable in United States currency bear non-taxable interest which varies from 1 $\frac{1}{4}$ % to 1 $\frac{1}{2}$ % over one-half of the London Interbank Eurodollar Market Rate (LIBOR) or, at the option of the Corporation, which varies from 1% to 1 $\frac{1}{4}$ % over one-half of the minimum United States commercial bank lending rate. The debentures are convertible, at the option of the Corporation, into a Canadian currency obligation bearing interest which varies from 1% to 1 $\frac{1}{4}$ % over one-half of the mean prime Canadian commercial bank lending rate. The Corporation is permitted to convert this obligation into series J debentures bearing taxable interest at various rates and, at the option of the Corporation, may be in either United States or Canadian currency. A United States currency loan would bear interest which varies from $\frac{3}{4}$ % to 1% over LIBOR or, at the option of the Corporation, from .30% to .55% over the minimum United States commercial bank lending rate. A Canadian currency loan would bear interest which varies from .30% to .55% over the mean prime Canadian commercial bank lending rate.

- (c) The 9.65% note, issued in January, 1980 in United States currency, is repayable in annual instalments commencing in 1983. The proceeds from this loan were used to repay the 8 $\frac{1}{2}$ % notes of \$20.5 million maturing 1991 and the bank loans of \$11.3 million, both payable in United States currency.

9. PENSIONS

The unfunded liability for pensions in respect of past service is \$127.4 million, as estimated by independent actuaries, of which \$23.6 million is recorded in the statement of Financial Position.

Pension costs charged to earnings were \$23.6 million in 1979 and \$18.8 million for the nine months ended September 30, 1980. These costs include those arising from current service and annual payments on the total unfunded past service liability. It is planned that future payments will discharge the total unfunded past service liability by 1994.

10. CAPITAL STOCK

(a) Preference shares

Authorized—7,893,400 shares of \$25.00 each par value, issuable in series of which 2,293,400 shares are reserved for conversion of series A shares into 9¼% cumulative redeemable preference shares series B.

Issued and outstanding	September 30	December 31	
	1980	1979	1978
		(millions of dollars)	
8% cumulative redeemable tax deferred preference shares series A (2,293,400 at September 30, 1980, 2,392,500 at December 31, 1979 and 2,400,000 in 1978).....	\$ 57.3	\$ 59.8	\$ 60.0
Floating rate cumulative redeemable retractable preference shares series C (2,000,000 at September 30, 1980 and at December 31, 1979 and 1978).....	50.0	50.0	50.0
Floating rate cumulative redeemable retractable preference shares series D (1,200,000 at September 30, 1980 and at December 31, 1979 and 1978).....	30.0	30.0	30.0
	<u>\$137.3</u>	<u>\$139.8</u>	<u>\$140.0</u>

Series A shares are entitled to annual dividends of \$2.00 per share payable quarterly; commencing with the quarterly payment December 1, 1988, dividends received on that and future quarterly dates will be taxable. They are redeemable after June 1, 1981 at the option of the Corporation at a premium of \$1.25 per share which reduces annually thereafter and are exchangeable after September 1, 1988 on a share for share basis at the option of the holder into 9¼% cumulative redeemable preference shares series B on which dividends will be taxable. On June 1, 1979, the Corporation became obligated to purchase in each twelve month period up to 120,000 series A or B shares to the extent that they are available at market prices not exceeding \$25 per share. The Corporation purchased for cancellation 7,500 series A shares during 1979 at prices averaging \$24.63 per share and 99,100 shares in the period January 1 to September 30, 1980 at prices averaging \$24.07 per share.

Series C shares are entitled to quarterly dividends at a rate equal to 1½% over one-half of the mean prime Canadian commercial bank lending rate. They are redeemable after May 31, 1980 at the option of the Corporation at a premium of \$.75 per share which reduces annually thereafter. The shares have a retractable feature which requires the Corporation to invite tenders for the purchase of all such shares and to purchase at May 31, 1987 at \$25.00 per share plus accrued and unpaid dividends all shares deposited with the Corporation pursuant to the invitation. Not less than 45 days prior to this date the Corporation is permitted to offer an increased dividend rate or to create additional retraction privileges for the benefit of shares not so purchased.

Series D shares are similar to series C excepting that they are entitled to quarterly dividends at a rate equal to 1¾% over one-half of the mean prime Canadian commercial bank lending rate and are redeemable at the option of the Corporation after December 31, 1980. The Corporation is similarly required to invite tenders for the purchase of these shares and to purchase shares so tendered at December 31, 1987.

(b) Common shares

Authorized—30,186,704 shares without par value.

Issued —11,691,128 shares at September 30, 1980 and at December 31, 1979.

19,400 shares were issued during 1979 at \$15.19 per share under the stock option plan.

11. DIVIDENDS

Dividends were declared as follows:

	Nine months ended September 30		Year ended December 31				
	1980	1979	1979	1978	1977	1976	1975
Aggregate (in millions)							
Preference shares*							
Series A.....	\$ 3.5	\$ 3.6	\$ 4.8	\$ 4.8	\$ 4.8	\$ 3.0	\$—
Related tax.....	—	—	—	—	.2	.5	—
Series C.....	3.4	2.7	3.6	2.9	1.7	—	—
Series D.....	2.0	1.6	2.2	1.7	.1	—	—
Common shares.....	8.8	5.9	8.2	—	2.3	12.9	16.3
	<u>\$17.7</u>	<u>\$13.8</u>	<u>\$18.8</u>	<u>\$ 9.4</u>	<u>\$ 9.1</u>	<u>\$16.4</u>	<u>\$16.3</u>
Per Share							
Preference shares*							
Series A.....	\$1.50	\$1.50	\$2.00	\$2.00	\$2.00	\$1.26	\$—
Series C.....	1.69	1.35	1.83	1.46	.85	—	—
Series D.....	1.67	1.35	1.83	1.45	.06	—	—
Common shares.....	.75	.50	.70	—	.20	1.10	1.40

*The series A, C and D preference shares were issued in April 1976, April 1977 and December 1977 respectively.

12. RELATED PARTY TRANSACTIONS

The Corporation is a subsidiary of Canadian Pacific Enterprises Limited which at September 30, 1980 held approximately 56% of the Corporation's outstanding common shares. Canadian Pacific Enterprises Limited is a subsidiary of Canadian Pacific Limited, a diversified corporation with head offices in Montreal, Quebec and consequently Algoma is related to the numerous companies in the Canadian Pacific group. The Corporation owns approximately 43% of the common shares of the associated company, Dominion Bridge Company, Limited and a 30% equity in the Tilden Mine joint venture.

In the normal course of business the Corporation sells its products to both Canadian Pacific Limited and to Dominion Bridge Company, Limited and to certain of their subsidiary companies at prevailing market prices and credit terms. Similarly, the Corporation regularly purchases transportation and other services, capital goods and iron ore pellets from the related parties.

The Corporation has a revolving operating line of credit with Canadian Pacific Securities Limited, a wholly-owned subsidiary of Canadian Pacific Enterprises Limited, in the amount of \$40 million.

Sales to related parties represented less than 9% of consolidated sales for the nine month periods ended September 30, 1980 and 1979 and purchases from these parties represented approximately 13% of consolidated cost of products sold for these periods.

The following amounts were receivable from and payable to related parties at September 30:

	<u>1980</u>	<u>1979</u>
	(millions of dollars)	
Accounts receivable.....	\$11.4	\$ 7.8
Accounts payable.....	\$.7	\$ 7.8
Promissory notes.....	\$14.0	—

13. RESTATEMENT OF PRIOR YEARS' FIGURES

Consolidated earnings for the reported periods have been restated where necessary to include adjustments to earnings which were originally included in the statement of Retained Earnings as adjustments in respect of prior periods. The statements of Financial Position and Changes in Financial Position have been restated accordingly.

Auditors' Report

To the Directors,
THE ALGOMA STEEL CORPORATION, LIMITED

We have examined the consolidated statement of financial position of The Algoma Steel Corporation, Limited as at December 31, 1979 and 1978 and the consolidated statements of earnings and retained earnings and changes in financial position for the five years ended December 31, 1979. For The Algoma Steel Corporation, Limited and for those other companies of which we are the auditors and which are consolidated in these financial statements, our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances. For the associated company accounted for by the equity method, we have relied on the reports of the auditors who have examined its financial statements.

In our opinion, these consolidated financial statements present fairly the financial position of the company as at December 31, 1979 and 1978 and the results of its operations and the changes in its financial position for the five years ended December 31, 1979 in accordance with generally accepted accounting principles applied on a consistent basis.

Sault Ste. Marie, Canada
February 7, 1980

(Signed) Peat, Marwick, Mitchell & Co.
Chartered Accountants

AR16

An aerial photograph of the Algoma Steel plant in a winter setting. The facility is a large industrial complex with numerous buildings, some with red roofs, and several smokestacks emitting white steam. The surrounding landscape is covered in snow, with a dark, snow-free area in the lower-left foreground. In the bottom foreground, a long, elevated conveyor system or bridge structure extends across the frame. The sky is a clear, pale blue.

ALGOMA STEEL



270 tons of liquid steel pours into moulds.



Canadians had discovered a new self-propelled vehicle called a bicycle... And were singing Irving Berlin's first all-time hit - Alexander's Ragtime Band - while clanging off to work on the new electric railway trolleys...

Colonel Sam McLaughlin was busily establishing the Canadian automobile industry...

Canadians were also learning to hunt and peck at a marvelous printing machine called a typewriter.

All Canada was seeing better and hearing better, thanks to Edison's incandescent lamp and Bell's voice-carrying machine.

And a new sense of political order and decorum heralded the start of Canada's first transcontinental railroad. In 1850, there were 66 miles of railway in the British North American Colonies. Ten years later, there were over 2,000 miles.

This was the Victorian age.



In Sault Ste. Marie, a new personality with persuasive and magnetic powers was about to turn a quiet frontier town of a few thousand people into a vibrant and progressive industrial community which now numbers over 80,000.

His name was Francis Hector Clergue. His story begins in March, 1894.

Soon after his arrival in Sault Ste. Marie,



empire. In rapid succession, he added a sulphite pulp mill to the wood pulp mill, a ferronickel reduction plant and a sulphuric acid plant. A railroad was extended northward, a charcoal plant employing hundreds of men chopping hardwood was opened, a fleet of 16 lake steamers and a street railway system provided transportation.

Power was harnessed on both sides of the St. Mary's River, and the master stroke was the formation of a steel company in 1901 to supply rails for Clergue's own railways as well as the rapidly expanding transcontinental railroads.

These were Clergue's achievements in the Sault, but by the year 1903, he had lost control of these enterprises. A few years



later, he left the Sault to promote other ventures elsewhere.

The seed he had planted in the Algoma wilderness had taken root and was growing. New properties were acquired and new equipment was moved in or built on site. A constant supply of raw materials was assured through the purchase of properties, or long term agreements to supply iron ore, coal, and other raw materials. The various enterprises related to the iron and steel business were reorganized into a single company in 1912.

... Algoma Steel was born.

1 Francis H. Clergue (1856-1939) Founder of Sault Ste. Marie's industrial community.

2 Queen Street, Sault Ste. Marie in the early 1900s

3 Horse drawn floats ready for 1902 parade

4 Plummer's Dock - 1899 with horse drawn 'stages' waiting for passenger boat to dock

5 Early 1900s photo of Algoma ironworks.

Canadians had discovered a new self-propelled vehicle called a bicycle...

And were singing Irving Berlin's first all-time hit - Alexander's Ragtime Band - while clanging off to work on the new electric railway trolleys...

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1



2

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His name was Francis Hector Clergue.

His story begins in March, 1894.

Soon after his arrival in Sault Ste. Marie,



Clergue saw the tremendous power potential of the St. Mary's River and acquired and completed an unfinished power project. The Sault began to grow with its first industry - The Tagona Water and Light Company.

With the rights to produce power on the St. Mary's River, Clergue needed industry to use the new-found power. His next step was the founding of a ground wood pulp mill in the Canadian Sault and the planning of a paper mill across the river in Michigan.

Clergue's inventive genius produced a pulp drying machine to cut the costs of shipping wet pulp and, when no one would build the machine, he set up the Algoma Iron Works: 'the most completely equipped machine shop and foundry in Canada'. Clergue would state with pride.

Iron ore discoveries north of the Sault brought about the building of Clergue's railroad to ship iron ore from Wawa to Michipicoten Harbour. This 12 mile long railroad was built in the wilderness and unauth-

orized as Clergue soon discovered; but government authorities later blessed its formation.

Clergue began to realize the full potential of his burgeoning industrial



3



4

empire. In rapid succession, he added a sulphite pulp mill to the wood pulp mill, a ferronickel reduction plant and a sulphuric acid plant. A railroad was extended northward, a charcoal plant employing hundreds of men chopping hardwood was opened, a fleet of 16 lake steamers and a street railway system provided transportation.

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5

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... Algoma Steel was born.

ALGOMA STEEL

The Algoma Steel Corporation, Limited, Sault Ste. Marie, Ontario, Canada.

ALGOMA STEEL

John Macnamara
President and
Chief Executive Officer

The Algoma Steel
Corporation, Limited

Sault Ste. Marie
Ontario, Canada
P6A 5P2

May 7, 1979

Dear Mrs. Anson-Cartwright,

Since 1958, The Algoma Steel Corporation, Limited, has virtually rebuilt its entire steelmaking complex, and has invested more than one billion dollars to ensure raw material supply and acquire existing modern steelmaking and primary processing facilities. In view of your interest as an Algoma shareholder, I am sending to you a copy of Algoma's corporate brochure, the first document of its type to be produced to describe these facilities in over fifteen years.

I trust you will find the content interesting and informative. Should you have any questions, please drop me a line and I will try to answer them for you.

Yours very truly,

A handwritten signature in dark ink, appearing to read "Macnamara", written in a cursive style.

JM:SB
Encl:

AR16

ALGOMA STEELMAKING



FOREWORD



Since the turn of the century, man has done more than ever before to create industrial change led by the steelmaking industry with vigorous expansion and innovative technological advances. In a few short years, steel has become the basis for some of Canada's largest industries. They contribute many billions of dollars to the economy of the country and employ close to half the industrial working force.

From the remarkable growth of the steelmaking industry in such a short span, it could be argued that steelmaking is relatively new: that everything the steel industry represents today was achieved with amazing rapidity. However, the history of steel stretches back into antiquity—even to before recorded history began.

Steel begins with iron ore, one of the earth's most abundant minerals consisting mainly of iron and oxygen.

Historians believe that the Hittites introduced ironmaking about 1500 B.C. The Old Testament mentions ironmaking, and archaeologists are still fascinated by the reverberatory furnaces in Ezion-Geber at the head of the Red Sea.

More recent evidence supports the theory that the famous swords of Damascus and Toledo were forged and 'beaten' into shape as early as 1000 B.C. The art of steelmaking had begun but was to remain dormant for many centuries. Even though steel, as that term is understood today, was being produced, quantities were infinitesimal.

In the late 1640's, the art of making steel crossed the Atlantic and with the founding of North America's first successful ironworks at Saugus, Massachusetts, the infant industry took roots and began to grow into the multi-faceted colossus it is today.



New technology, innovative processes and even a totally new vocabulary were introduced to the industry. Samuel Higley, who received the earliest known steelmaking patent in 1729, conceived a process to produce a product that was variously named 'German Steel', 'blister steel' or 'cemented steel'. The re-introduction of crucible steelmaking followed and was perfected by the Garrard Brothers of Cincinnati in 1832. But the product proved so expensive, it was used almost exclusively for surgical instruments, fine tools and scientific apparatus.

One notable exception was the perfection of figure skating blades formed of steel – rather than iron – by Jackson Haines.

It is debatable whether Sir Henry Bessemer of England, or William Kelly, an American, should receive credit for the introduction of the first high-tonnage steelmaking process. But with the combination of both their processes by engineer Alexander Lyman



Holley, high-tonnage steel-making became a reality. Both crucible and the combined Bessemer/Kelly/Holley processes then gave way to the open hearth furnace.

This process was the foundation of the North American steel industry which eventually brought world-wide recognition to Andrew Carnegie, the great steel entrepreneur.

For generations, the open hearth process dominated the steel industry but has now given way to the more productive basic oxygen and electric steelmaking processes.

In 1901, Francis H. Clergue laid the foundation for what was to become one of Canada's major steelmaking facilities... The Algoma Steel Corporation, Limited.

This brochure is about Algoma Steel, its products, its people and its future.

STEELMAKING: THE INGREDIENTS



Like all integrated steel companies, Algoma handles more materials per ton of finished product—in a greater variety of ways—than most other large-scale manufacturing industries.

But unlike many contemporaries, Algoma is self-sufficient in metallurgical coal and iron ore which are the industry's two basic ingredients in steelmaking.

Each year Algoma converts over two million tons of coal—originating from its mines in West Virginia—into coke for its blast furnaces in Sault Ste. Marie.

Iron ore joins the ingredients in the form of high grade pellets from a joint venture—the Tilden Mine—in nearby Northern Michigan and as

sinter from Algoma's Ore Division in Wawa, Ontario.

Limestone from Michigan: chemicals: ferroalloys: other energy and the skills of close to 13,000 people complete the ingredients list.

Tested and measured, weighed and mixed, three main ingredients form the basis of the ironmaking recipe:

Sinter and pellets,
Coke,
Limestone.

A ton of molten iron is produced through the reduction of 3,500 lbs of iron ore interacting with 900 lbs of coke, a pinch of limestone and 3,600 lbs of air which is superheated to 2,000 degrees F.

Washed, dried and sorted, coal comes from Algoma's mines to Sault Ste. Marie where it is blended, pulverized and then heated in coke ovens, in the absence of air, to remove liquid and gaseous by-products as the coal is slowly converted into coke.

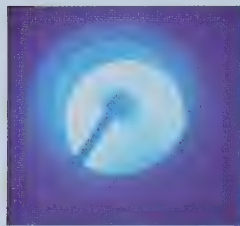
Algoma has five coke oven batteries in service consisting of 320 ovens.

After a coking time, of approximately 18 hours, the coke at 2,000 degrees F is pushed into waiting quench cars, quenched with water, crushed, screened and conveyed to join other ironmaking ingredients ready to be charged into one of Algoma's five blast furnaces.



- 1 Coke being pushed into the quench car after completion of the coking cycle.
- 2 Maintenance millwright checks condition of coke oven doors and jams.
- 3 Coal from self-unloading vessel is conveyed to coal storage area.
- 4 X-ray analysis unit checks raw material quality.
- 5 Self-unloader tops-off limestone supply.

STEELMAKING: THE BEGINNING-IRON



A 'Steeltown' anywhere in the world is readily identified by the silhouette of the powerfully symbolic blast

furnace. 30 storeys tall against the skyline of Sault Ste. Marie, new Number 7 is the largest of Algoma's five blast furnaces.

With a capability to produce over 5,000 tons of hot metal a day, Number 7 is the ideal example of yesterday's alchemy becoming today's technology. Number 7, fully automated and computer controlled, was built as an integral part of Algoma's expansion and modernization program to reach 4 million tons of annual raw steel capacity.

Operating continuously at temperatures that reach 3,400 degrees F, the blast furnaces digest iron ore, coke and limestone and produce thousands of tons of molten iron daily through a taphole located near the bottom of each furnace.

The bulk of the blast furnaces' output is transported by means of special 'Torpedo' cars to the next step in steelmaking... the basic oxygen steelmaking plant... B.O.S.P. for short... where the molten iron is refined into steel.





- 1 Blast furnace casting.
- 2 Torpedo car delivers molten iron to #2 B.O.S.P. shop.
- 3 Command room of computerized #7 Blast Furnace.
- 4 View of #7 Blast Furnace.
- 5 Iron sample being poured into mould for analysis.
- 6 Ironmaker assists iron flow.



STEELMAKING: MOLTEN INFERNO



The molten iron together with scrap and fluxes is charged into a three storey high, barrel shaped, refractory lined vessel in Algoma's newest basic oxygen steelmaking plant.

Under computerized control, oxygen is injected at flow rates of 28,000 cubic feet per minute into the vessel until the undesirable quantities of carbon, sulphur, silicon and manganese are removed to produce one of more than 450 grades of steel.

The intense flames and fumes escaping from the furnace during the oxygen blow are captured and cleaned so that only a plume of white steam is visible from the gas cleaning plant.

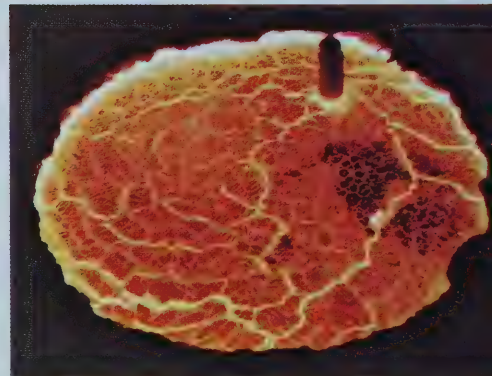
When the desired temperature



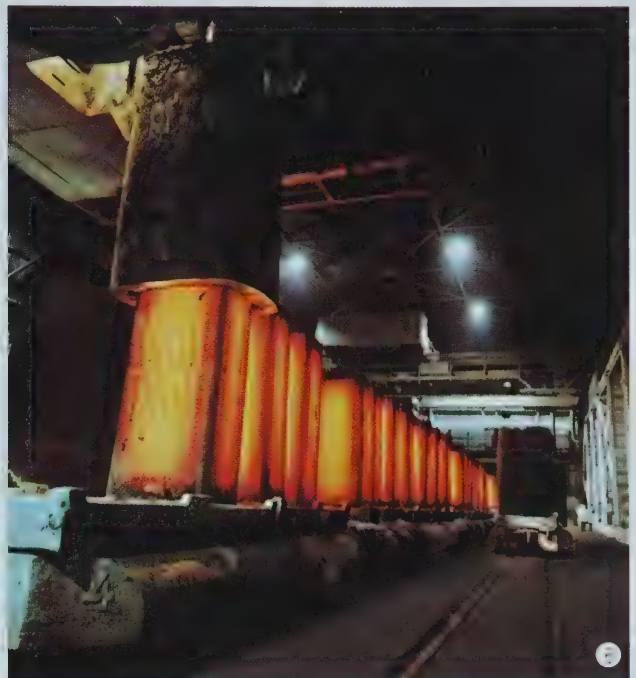
and chemical analysis are obtained, the vessel is tilted and the liquid steel is tapped into a refractory lined ladle where elements such as manganese, silicon, aluminum and other alloys can be added to meet customer specifications.

The ladle is picked up by a crane and is taken either to the continuous slab casting machine or the teeming aisle where 270 tons of liquid steel is poured or 'teemed' into ingot moulds.

After a prescribed time, the moulds are removed and ingots ranging from 10 to 26 tons are charged into soaking pits, where they are heated to 2,400 degrees F, prior to rolling into blooms or slabs in the primary rolling mills.



- 1 Charging molten iron into #2 B.O.S.P. vessel.
- 2 Sampling of steel.
- 3 Slag covering on liquid steel.



- 4 Tapping steel in #2 B.O.S.P
- 5 Liquid steel is teemed into moulds.
- 6 Moulds stripped from solidified ingots.
- 7 Re-heated ingot is lifted from soaking pits.

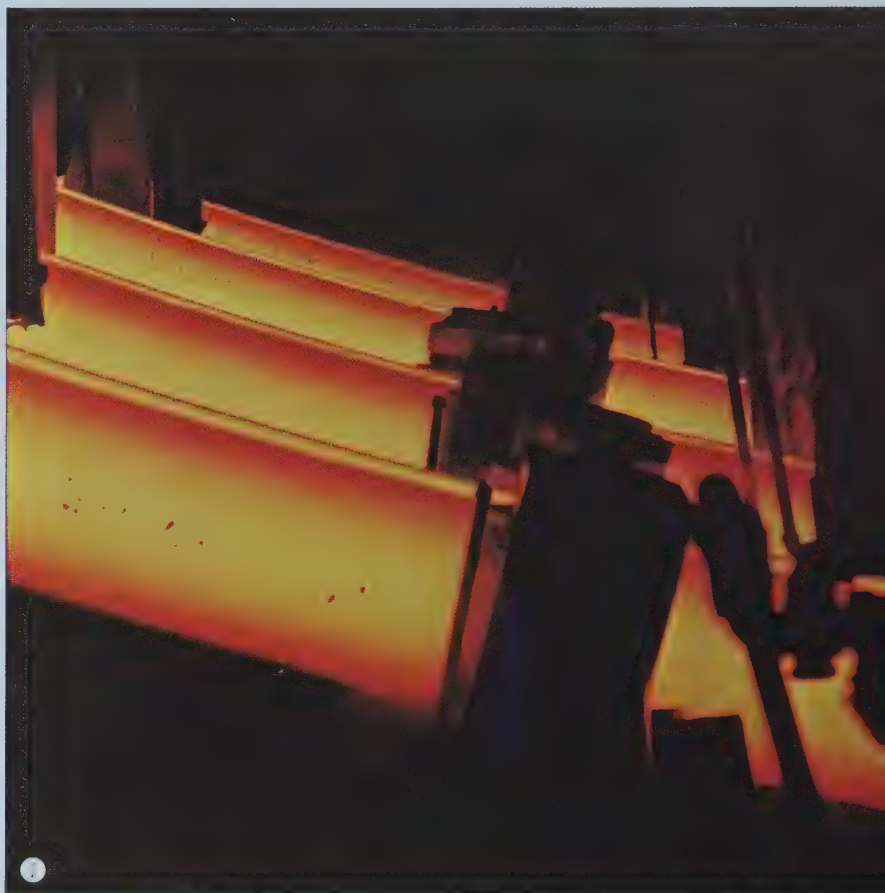
STEELMAKING: ENDLESS MOTION

Algoma began producing continuously cast blooms in 1967 and the next year pioneered the continuous casting of 'dog bone' shaped beam blanks for rolling into structural shapes. The liquid steel comes from the #1 basic oxygen shop which began operating in 1958 – producing North America's first high carbon steels by this process.

In 1973, Algoma shut down its open hearth furnaces and since that date has produced all of its steel in the three 100 ton and two 270 ton basic oxygen vessels.

This same innovative spirit is behind the new computer controlled twin strand slab casting facility which, together with the original casting plant, will enable Algoma to continuously cast 40% of its raw steel production.

Continuous casting bypasses the traditional ingot route, saving energy, improving productivity and quality and reducing waste. The liquid steel is poured directly into oscillating water-cooled copper moulds. Solidified steel emerges from the bottom of the unit as beam blanks, blooms or slabs which are automatically flame-cut to desired lengths by remote controlled torches. These semi-finished shapes are then conditioned, if necessary, before charging into reheating furnaces where they are heated to 2,300 degrees F prior to rolling into one of many different rolled steel products.





- 1 Continuous bloom casting at 100 tons per hour.
- 2 Flame cutting beam blanks and slabs to length.
- 3 Continuously cast slab emerging from straightening and withdrawal units.
- 4 Precisely identified beam blanks and slabs.



STEELMAKING: ROLLING ON



Since first beginning to roll flat rolled products in 1953 on its combination bar and strip mill, Algoma has continued to anticipate customer needs with new and upgraded rolling mills and finishing equipment.

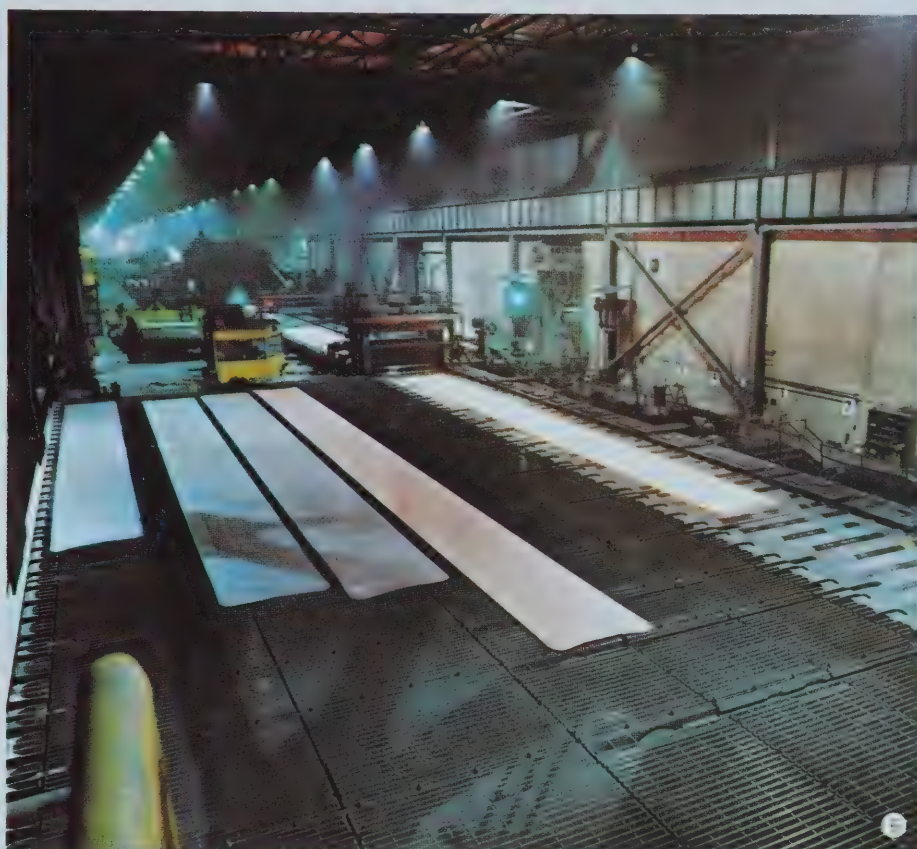
Algoma has Canada's widest and most sophisticated rolling mill—the 166" plate mill. It is the only mill in Canada capable of producing plate 153" wide.

At Algoma, innovation plays its part. For this plate mill, a totally integrated and automated computer system was incorporated and a unique 'walking beam' slab reheat furnace was installed.

In response to the increasing demand for hot rolled sheet and plate, the 106" hot strip mill, producing up to 96" wide hot rolled coils—the widest in North America—was relocated and completely computerized in 1975.

As a result, a more efficient new arrangement was created. Not only does the 166" wide plate mill produce the widest steel plate in Canada, it also serves as a roughing mill for the relocated 106" hot strip mill. Thus Algoma is able to maintain full utilization of a modern combination plate and strip mill to satisfy varying market demand.

Coils from the hot strip mill are pickled in diluted hydrochloric acid, then reduced in thickness on the 80" cold reduction mill and are then annealed and tempered before finishing to satisfy customer requirements.



- 1 North America's widest strip mill produces coils up to 96" wide.
- 2 Mill scale is removed from hot rolled strip in the 100" continuous pickling line
- 3 Wide plate emerging from 166" plate mill
- 4 Algoma-designed 166" plate mill pulpit keeps automated operation under the immediate control of the roller
- 5 Flame cutting of plate to customer's specified size
- 6 Wide plate cools on hot bed prior to finishing.
- 7 80" cold reduction mill reduces thickness and enhances surface quality
- 8 Coils ready for annealing



STEELMAKING: TAKING SHAPE



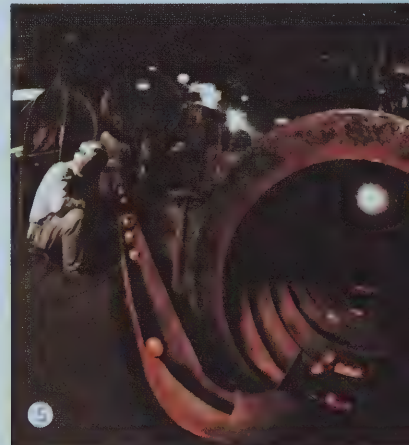
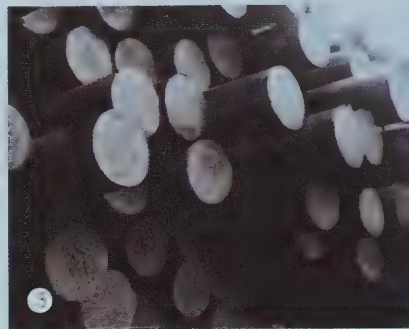
In 1961 wide flange structural shapes up to 24" deep were first produced on Algoma's wide flange beam mill—the only mill of its kind in Canada. Continuing change and improvement in this mill has ensured Algoma's significant participation in the Canadian market for structural shapes.

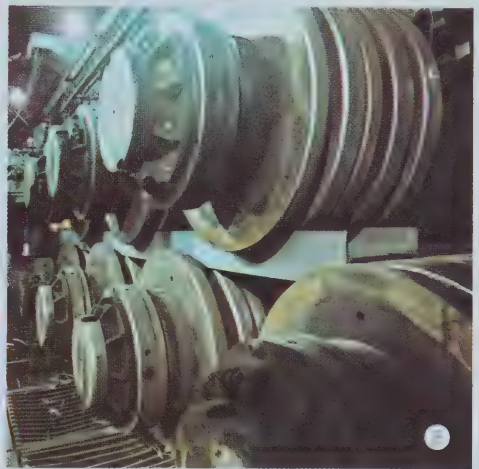
The company also markets welded wide flange shapes up to 47" deep.

Smaller structural sections such as angles, channels, I-beams and centre sills fill out this product range.

Rails and rail fastenings were the first products Algoma produced. The company originally supplied rails and fastenings for Francis Clergue's own railway and for Canada's transcontinental railways. Today, the company is still a major supplier to rail users in Canada.

Algoma also serves the mining industry with forged steel grinding balls from 1" to 4" in diameter used as grinding media in the crushing and processing of many types of ores.





- 1 Rails being pre-cooled before further finishing
- 2 Splice bars ready for shipment
- 3 Unconditioned tube rounds
- 4 Hot saw cuts wide flange beams to length.
- 5 Controlled cooling of forged grinding balls
- 6 24" section rolling off Canada's only wide flange beam mill.
- 7 Structural beam sections cooling prior to finishing
- 8 Roller straightener trues-up structural beams.



STEELMAKING: SEAMLESS MAGIC



The growing demand for energy resources has led to the development of highly sophisticated and vital steel products at Algoma's seamless tube mill.

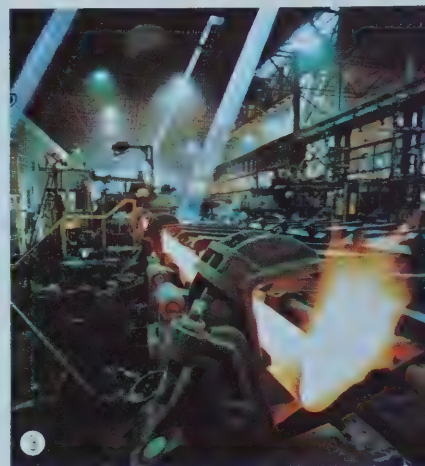
Innovative processing technology, precise metallurgical control and steel chemistry blend together in this unique mill to produce a wide range of specialty seamless tubular products for the North American oil and gas producing industries.

Meeting exacting industry standards, Algoma's seamless products include casing, line pipe and mechanical tubing that range from 4 1/2" to 12 3/4" outside diameter and include extra high strength grades for critical applications.

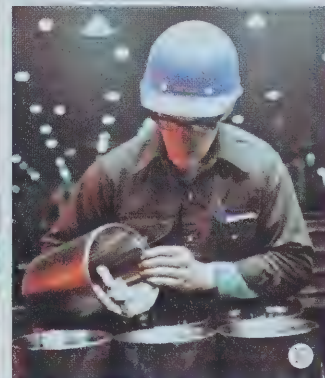
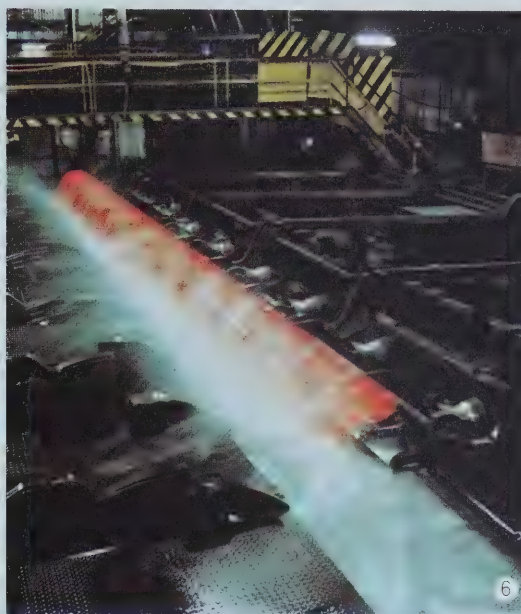
The magic of seamless tube production begins at the rotary heating furnace where solid steel rounds are heated to precise rolling temperatures. The heated round then travels to a rotary piercer where the solid round is converted into a cylindrical shell, then to the plug and sizing mills where the inner diameter and wall thickness of the tube are formed.

Algoma's patented inside-outside quench, coupled with high temperature tempering, completes the process.

Every length of pipe must meet rigid Algoma quality control standards.



- 1 Tube rounds moving to the seamless mill.
- 2 Rotary hearth furnace bringing tube rounds to rolling temperature.
- 3 Reeling the hot rolled shell improves the inner and outer surface of the tube
- 4 First stage inspection of tubes on cooling bed.
- 5 A reheat furnace brings tubes to quenching temperature



- 6 The quenching operation.
- 7 Seamless tubular products cool prior to finishing.
- 8 High strength casing ready for shipment.
- 9 Tubular seamless products are end finished to customer requirements
- 10 Thread inspection of machined coupling.



STEELMAKING: QUALITY COUNTS

One of the most important elements for which Algoma is justly proud is a rigid adherence to high standards of quality control.

Quality control is the ability to consistently assure timely production and delivery of steel products manufactured to prescribed specifications.

From raw materials standards to precise metallurgical balance and control, here are just a few of the ways Algoma does it.



4



5



6



- 1 Rail loading seamless tubes for shipment.
- 2 Vessel transportation from Algoma's own docks.
- 3 Trucks take on load of wide flange beams.

- 4 A customer-prepared pressed part under scrutiny in preparation for processing an order.
- 5 Evaluation of fracture face after impact testing.
- 6 Atomic absorption unit for analysis of waste water.



- 7 Examining steel products with scanning Electron Microscope
- 8 Tensile testing of finished product
- 9 Gas products are analyzed on computerized gas chromatograph
- 10 Preventative maintenance inspection being carried out using ultrasonic testing equipment
- 11 Industrial hygiene analysis
- 12 Steel products and process samples are analyzed on an automated spectrograph



The Algoma Steel Corporation, Limited, Sault Ste. Marie, Ontario, Canada.



AR16

ALGOMA STEEL PEOPLE



PROUD AND SKILLFUL

Energy. It is the promise of achievement: the motion, vitality and strength behind the steelmaking art and the discipline of the people who make steel. It is felt in the driving pulse of the giant Algoma complex as the raw materials that form the basis of steel are transformed – step-by-step – into steel products ready to be used in the commercial and industrial universe. It is reflected in the skills and dedication of the hundreds of steelpeople who match the pace of the steelmaking progress from beginning to end. Pictured here is but a small segment of the many men and women who play vital roles throughout the steelmaking process. These are the production control planners, cargo ship's mate, diesel locomotive engineers, draftsmen, engineers, coke oven foremen and mechanics, blast furnace hot metal samplers, B.O.S.P. melters, scarfers, rolling mill operators, electricians, machinists, millwrights, coilers, construction workers, computer operators, metallurgists and

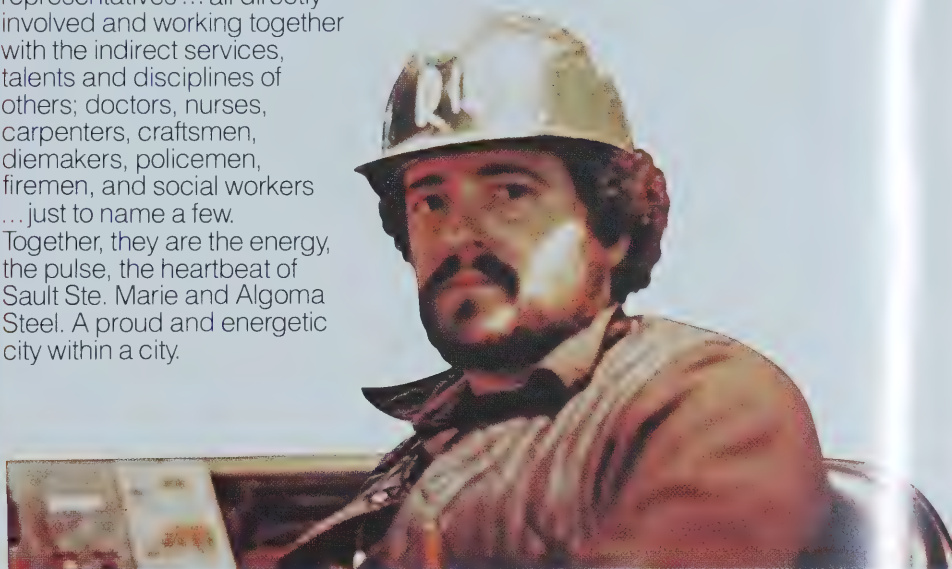


No better example of the old adage: 'work hard, play hard' may be found than in the people who are Algoma Steel and Sault Ste. Marie. Algoma's steelworkers pour millions of dollars annually into the city's economy. They enjoy unparalleled beauty in the countryside that surrounds them. Hunting, fishing, camping, hiking... all combine with a vast number of winter and summer sports, music, crafts, art... and the simple pleasures of good old-fashioned neighbourly get-togethers.





chemists, sales engineers,
marketing managers, sales
representatives ... all directly
involved and working together
with the indirect services,
talents and disciplines of
others; doctors, nurses,
carpenters, craftsmen,
diemakers, policemen,
firemen, and social workers
... just to name a few.
Together, they are the energy,
the pulse, the heartbeat of
Sault Ste. Marie and Algoma
Steel. A proud and energetic
city within a city.







In a city that is proud of its program of re-development, there is still a reverence for its heritage reflected in the careful maintenance of historical sites and natural parklands. Overall, there is a sense of harmony: a sense of belonging few other Canadian cities may boast.

As the infant steel industry began to take shape, it was strengthened by improved steelmaking techniques and by the honed and practiced skills of an ever growing influx of steel workers. Vigorous, eager and dedicated they came to the Sault from many distant points. And they stayed.

Most of them spent their entire working lives at Algoma. Many left the legacy of the steelmaking art to their sons, daughters and grandchildren. They wove their heritage, culture and customs into the fabric of the community's patchwork quilt of many nationalities.

They were the handful of employees who laid the foundation of what has become a giant, ever growing steelmaking industry. Now numbering over 13,000, they represent the skills and experience brought to Algoma from more than 50 countries throughout the world.

Close to 80 years of accumulated Algoma steelworking experience is represented by the Nanne family of the Sault. L. to R.; Berardino Nanne (38 yrs.), Silvio Nanne (22 yrs.), Gerald Nanne (18 yrs.), and the youngest member to join Algoma, Sylvia Nanne (1 yr.)



*Spectacular colour,
clean crisp air, and a
rugged beauty that
challenges the imagi-
nation surrounds the
Sault. Pictured here
is a tiny segment of
the fabled Agawa
Canyon where, each
autumn, thousands
travel via the Algoma
Central Railway to
capture vivid and ever
changing scenery
in camera, mind...
and soul.*

Their natural desire to succeed and do the best job possible continues to permeate the entire Algoma organization. Algoma's constant goal is to establish a long term relationship with its customers, backed by teams of experts who believe that quality people make quality steel because at Algoma...

"Steel is our business"

Algoma employees are not only steelpeople. Like a vast interlocking mosaic, they complement Sault Ste. Marie and the other places where Algoma is present—they are involved; in the community, in the municipality, in their churches and in sports and recreation. They work for the enjoyment of knowing that the skills which are essential to Algoma can also be used in many ways to help the community where they live.



The Algoma Steel Corporation, Limited, Sault Ste. Marie, Ontario, Canada.



AR16

ALGOMA STEEL PRODUCTS



MEETING THE CHALLENGE OF CHANGE

Change...without it, industrial progress gives way to inevitable obsolescence. That's why the ability to anticipate change and answer it—quickly and knowledgeably—is a major strength and a proven tradition of Algoma.

Leadership. Innovation. Versatility. Reliability. These are the key words and the philosophy that back Algoma's unique position among Canadian steel producers.

Algoma supplies some of the widest plate, hot rolled sheet, and cold rolled sheet steel available in North America. In 1980, heat-treated steel plate will be added to the list of other Algoma specialties.

To help answer the needs of North America's vital oil and gas industry, Algoma produces a wide range of sophisticated oil country tubular goods to industry standards and to special customer specifications. Specialized high strength and sour gas casing grades have been developed by Algoma for critical applications.

Algoma markets Canada's only wide flange and welded wide flange beam shapes for use in the construction industry. In addition, the company produces a wide range of standard miscellaneous structural shapes as well as grinding balls and rods for the mining industry.

And from its very beginning, Algoma has been—and still is—a major supplier of rails and fastenings for industry and for the ribbons of rail that tie our country together.

There is an ever growing changing demand for a diversity of steel products that must meet rigid specifications in thousands of customer applications.

Algoma has kept pace with change...by modernizing, updating and replacing equipment while phasing in new ideas and technology...and by strengthening and broadening its marketing expertise to anticipate and satisfy the diverse steel requirements of an important asset—its customers.

The key is total involvement.

From initial contact through to shipping the finished steel product, Algoma's people are committed to customer service. They work alongside the customer to help select the right steel for specific applications and to determine present and future requirements.

They get involved in the solution to a fabricating problem or in the development of new steels with special properties that will fit the customer's specific requirements. They plan deliveries to meet the customer's critical timing schedule.

(continued)



FLAT ROLLED

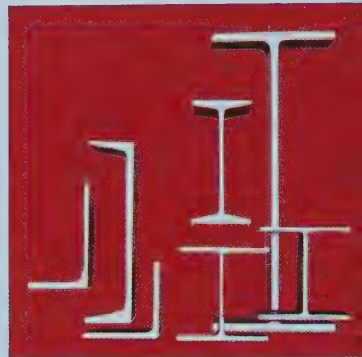
- 1 Extra-wide hot rolled sheet is stamped, formed, assembled and welded into automobile frames for use throughout North America
- 2 Special cold rolled steel is supplied for specific customer use
- 3 Stamping machines provide shaped blanks for industry.



PLATE

- 4 Special high quality steel plate is fabricated into giant bucket wheel excavator
- 5 Algoma plate has many applications in Marine construction





SHAPES

A wide variety of structural shapes is available to the construction industry.



SEAMLESS

Algoma seamless tubular products—casing, line pipe, and mechanical tubing—are used deep in the heart of the world's oil and gas country.



The Algoma team works closely with designers in promoting the use of Algoma's products to develop new product applications, assist in the selection of the right steel, and pass on information of new developments within the steel industry.

Personnel are strategically located in the market place to assist the customer during the running of trials of new steels with follow-up steel quality reports or any other technical assistance requested.

Sales personnel located in major cities across Canada provide direct contact and assistance to the customer in planning deliveries and service follow-up. Computerized terminals in all offices allow fast, accurate access to the customer's order specifications and shipment status.

Total involvement and proven ability maintains Algoma as a leader in the Canadian steel industry.



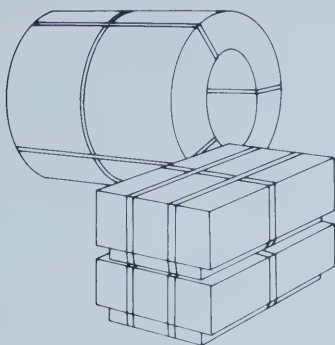
RAILS

Algoma light and heavy rails serve industries... and span the continent.

GRINDING BALLS

Canada's mining industry uses Algoma Steel grinding balls.





Hot Rolled Sheet and Strip (Coils or Cut Lengths)

Width: 19 mm to 2 438 mm	3/4" to 96"
Thickness: 5.82 mm to 1.22 mm	0.229" to 0.048"
Cut Lengths: 1 143 mm to 9 754 mm	45" to 384"
Coils: 508 mm, 610 mm & 762 mm I.D.	20", 24" & 30" I.D.
1 880 mm max. O.D.	74" max. O.D.
17.86 kg max. wt. per mm of width	1,000 lb max. wt. per inch of width

Cold Rolled Sheet and Strip (Coils or Cut Lengths)

Width: 19 mm to 1 930 mm	3/4" to 76"
Thickness: 3.18 mm to 0.25 mm	0.125" to 0.010"
Cut Lengths: 610 mm to 4 877 mm	24" to 192"
Coils: 508 mm & 610 mm I.D.	20" & 24" I.D.
1 880 mm max. O.D.	74" max. O.D.
17.86 kg max. wt. per mm of width	1,000 lb max. wt. per inch of width

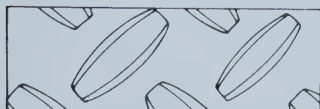


Hot Rolled Plate (Sheared & Gas Cut Edge)

Width: 800 mm to 3 850 mm	32" to 153"
Thickness: 4.8 mm to 100 mm	3/16" to 4"
Lengths: up to 24 400 mm	960"

U.M. Plate

Width: up to 660 mm	26"
Thickness: up to 25 mm	1"
Lengths: up to 16 700 mm	660"



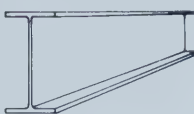
Floor Plate/Ninety Pattern

Width: 810 mm to 2 440 mm	32" to 96"
Thickness: 4.8 mm to 11 mm	3/16" to 7/16"
Lengths: up to 21 300 mm	840"

Floor Plate/Fifty Pattern

Width: 810 mm to 2 440 mm	32" to 96"
Thickness: 2 mm to 11 mm	0.079" to 7/16"
Lengths: up to 21 300 mm	840"

ALGOMA STEEL



Wide Flange Shapes

150 mm x 150 mm x 22 kg/m	6" x 6" x 15#/ft
up to	
610 mm x 329 mm x 241 kg/m	24" x 12 3/4" x 162#/ft
to a maximum weight of	
310 mm x 310 mm x 283 kg/m	12" x 12" x 190#/ft

Welded Wide Flange Shapes

Beams: 700 mm to 1 200 mm	28" to 47"
Columns: 350 mm to 550 mm	14" to 22"

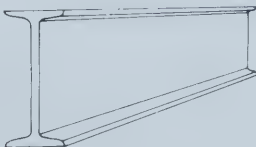
Bearing Pile Shapes

200 mm x 200 mm x 54 kg/m	8" x 8" x 36#/ft
up to	
310 mm x 310 mm x 174 kg/m	12" x 12" x 117#/ft



Standard Channels

100 mm x 8 kg/m	4" x 5.4#/ft
up to	
380 mm x 74 kg/m	15" x 50#/ft

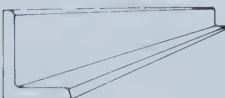


Standard Beams

75 mm x 8 kg/m	3" x 5.7#/ft
up to	
310 mm x 52 kg/m	12" x 35#/ft

H-Beams

100 mm x 19 kg/m	4" x 13#/ft
------------------	-------------



Equal Leg Angles

51 mm x 51 mm x 5 mm	2" x 2" x 3/16"
up to	
203 mm x 203 mm x 29 mm	8" x 8" x 1 1/8"

Unequal Leg Angles

63 mm x 51 mm x 5 mm	2 1/2" x 2" x 1/16"
up to	
178 mm x 102 mm x 22 mm	7" x 4" x 1/16"

The Algoma Steel Corporation, Limited
Sault Ste. Marie
Ontario, Canada.

Sales offices:
Saint John
Montreal
Toronto
Hamilton
Windsor
Winnipeg
Calgary
Vancouver

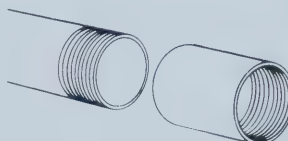
Hot Rolled Bars

Rounds: 16 mm to 254 mm	5/8" to 10"
Squares: 51 mm to 86 mm	2" to 3 3/8"
Flats: 102 mm to 203 mm	4" to 8"



Reinforcing Bars

Metric No. 15 to 35	#5 to #11
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Seamless Pipes and Tubes

Casing: 114 mm to 298 mm	4 1/2" up to 11 3/4" O.D.
Line & Standard Pipe: 114 mm to 324 mm	4 1/2" up to 12 3/4" O.D.
Mechanical Tubing: 114 mm to 324 mm	4 1/2" up to 12 3/4" O.D.
Couplings & Coupling Stock	



Rails and Fastenings

A S.C.E. Light Rails: 20 kg/m & 30 kg/m	40#/vd & 60#/vd
Various Heavy Rails: up to 68 kg/m	136#/vd
The Plates & Joint Bars	

Grinding Balls and Rods

Forged Balls: 25 mm to 105 mm	1" to 4" dia
High Carbon Rods: 38 mm to 111 mm	1 1/2" to 4 3/8"

Other Products From Algoma

Pig Iron
Coke
Coal Tar Chemicals
Blooms, Billets and Slabs
Elevator Tees
Zees and Centre Sills
Miscellaneous Channels



Algoma Tube Corporation:
Houston & Denver



AR16

A simulated planet created by magnifying
a sample of steel 1,500 times
in Algoma's Electron Microscope.



TODAY AND TOMORROW

"... We must continue to find ways and means to maximize the utilization of our existing and planned facilities to ensure that our efforts and capital are well-spent. We must work as a team with a single purpose to achieve our objectives and meet the challenges of tomorrow..."

John Macnamara
President

Algoma has come a long way from the 'ironworks' it was at the turn of the century, and the rail and structural mill of the forties. Today, Algoma is one of the most modern steel companies in North America and is recognized in many parts of the world for its innovative technology and significant contribution to the steel industry.

This success has been achieved by implementing sound business strategies, investing in modern technology and new facilities and adapting resources to the needs of the present.

Today, Algoma is:

- ☐ A 97% Canadian owned company.
- ☐ Self-sufficient in key raw materials which assures continuity of supply at competitive prices.
- ☐ A steelmaker with modern primary iron and steelmaking facilities and efficient combination rolling mills which offer tremendous flexibility in the production of existing products and adaptability to the development of new products.
- ☐ Proud of its loyal, well trained and skillful work force – one of the most efficient in North America, as evidenced by high productivity and cost competitiveness.
- ☐ Known for its earned reputation of building long term relationships with its customers through responsive and innovative marketing and sales policies.
- ☐ Capable of recognizing changing circumstances and making the necessary decisions to adapt accordingly.





Algoma's future is solidly planned on a philosophy that continued success depends upon today's demands and tomorrow's needs being dealt with creatively and carefully.

To this end, Algoma is continuing to analyze its markets and its manufacturing facilities to identify new opportunities and areas for improvement. Many opportunities for steel are apparent in the automotive, energy-based, transportation, construction and other industries.

The recent concerns about substitutions for steel overlook the basic fact that steel possesses characteristics which cannot be economically duplicated by other materials. It would be difficult – if not impossible – to substitute other materials for steel in many applications.

Improvements to the manufacturing process are a continuing need. Machines wear out, become obsolete or inefficient which necessitates replacement with modern, more productive facilities. Since 1958, Algoma has virtually rebuilt its entire steel-making complex.

Algoma has invested more than one billion dollars to ensure raw material supply and to acquire its existing modern steel-making and primary processing facilities.

Introduction of further new rolling mill and steel processing equipment will enable Algoma to fully utilize its raw steel capacity and to produce new steel products, particularly in the fields where high strength and improved quality steels are an important factor.

The objectives and the constant goals of Algoma as it moves toward tomorrow are:

To provide a safe, efficient, productive workplace;
To preserve the financial strength of the company;

To produce acceptable profits to ensure;

- adequate returns to shareholders,**
- funds for investment in modern technology and new facilities,**
- stable employment,**
- an ability to respond to new opportunities.**

To service and grow with customers;

To provide opportunities for employees to develop their potential;

To foster the development and prosperity of the community;

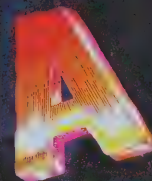
To protect the environment.

From a strong foundation, Algoma strives for excellence as a responsible corporate citizen and a major factor in the Canadian steel industry.

ALCOMA STEEL TOMORROW



AR16



ALGOMA

IN THE SIXTIES

SAULT STE. MARIE / ONTARIO



Algoma – growing with the twentieth century

The steelworks of The Algoma Steel Corporation, Limited is located at Sault Ste. Marie, Ontario, on the St. Mary's River, a link of the St. Lawrence Seaway System between Lake Superior and Lake Huron. Algoma is Canada's largest producer of coke and pig iron and stands second in total tonnage of steel produced.

THE BEGINNING: The origin of the company dates from 1894 when the power potential of the rapids in the St. Mary's River was recognized and development of the power was started. The discovery of iron ore in the Michipicoten Iron Range north of the Sault, coupled with the building of the transcontinental railways at that time, led to the construction of the steelworks in 1901. On February 18th, 1902, the first steel produced in the Province of Ontario was "tapped" at Algoma and on May 5th, that year the first Canadian railroad rails were rolled. The "Plant" as it was known then, consisted of two small blast furnaces, a Bessemer steelmaking plant with a capacity of 600 tons per day, a 28 inch blooming mill and a rail mill with a capacity of 1,000 tons per day.

THE MODERN STEELWORKS: Today, Algoma is a stable, integrated steel producer employing over 7,500 people. The steelworks is concentrated in one square mile. The docks area alone is over 4,000 feet long and handles over five million tons of incoming coal, iron ore, and limestone, and outgoing pig iron and steel shipments annually.

The primary steelmaking facilities include 253 coke ovens, four blast furnaces, six basic open hearth furnaces and three basic oxygen furnaces. Rolling mills include a 46" blooming and 122" plate mill, a 44" blooming mill, a 25" six-stand billet mill, a 32"

breakdown mill, 30" rail and structural mill, wide flange beam mill, an 18" merchant mill, a combination bar and strip mill, a 106" hot strip mill, cold mills and a ball mill. Shops and foundries, rail and motorized yard transportation equipment, maintenance and masonry departments, laboratories and administrative offices provide necessary services.

RECENT GROWTH: Practically all of the present steelworks plant and equipment is new since 1950, when Algoma commenced a series of modernization and expansion programs to replace obsolete equipment and to widen its range of finished products. Consequently, annual steel ingot capacity has more than doubled, now being 2,200,000 net tons.

No. 6 and No. 7 coke oven batteries constituting 75% of present capacity were built in 1953 and 1959 respectively. In the iron and steel producing areas, No. 6 blast furnace was built in 1953 and enlarged in 1958. No. 5 blast furnace was enlarged in 1960 and No. 3 blast furnace in 1964. Today, there are six open hearth furnaces. A faster, more efficient method of refining molten iron to steel, the basic oxygen steelmaking process, was introduced in 1958 and expanded in 1963. New finishing mills have diversified Algoma's products: the combination bar and strip mill (1952), cold mills (1954 and 1964 respectively), ball mill (1954), bloom and plate mill (1959), wide flange beam mill (1961), and wide hot strip mill (1963).

In the same period The Algoma Steel Corporation has modernized and mechanized its ore and coal mining properties and undertaken extensive development and exploration programs assuring adequate supplies of raw materials for future production.

steel making at Algoma



The manufacture of steel requires three basic raw materials:

- ☐ Iron ore, from mines around Lake Superior.
- ☐ Coking coal, from West Virginia.
- ☐ Limestone, from Michigan.

Great Lakes' freighters and rail transport bring these materials to Algoma's docks.

Electric power, water and air are also essentials in the manufacturing process.

First, coal is converted to coke. Then the coke is used with limestone to smelt iron ore to produce molten iron, and finally the iron is refined into steel.

COAL TO COKE: Coal is baked into coke so that it is porous enough and sufficiently free of tar to serve as an efficient fuel in the blast furnaces. Two distinct types of coal are used—low volatile for its binding quali-

ties and high volatile for its gas-producing qualities.

The coal is baked in the ovens for about 17 hours during which time the gases and tars are driven off by heat.

The gases and tars are collected and valuable coal chemicals such as tar, naphthalene, ammonium sulphate, pyridene, toluol, xylol and benzol are recovered. The remaining gases are used as fuel in the open hearths, reheating furnaces and other areas in the plant system.

At the end of the coking period the coke is pushed out of the oven into a special rail transfer car and cooled by water sprays.

ORE TO IRON: Pig iron is produced in the blast furnace. Measured quantities of iron ore, limestone and coke are charged through the top of the furnace and subjected to a blast of pre-heated air and coke oven gas introduced, under pressure, near the base of the furnace.

Fanned by air the coke burns. The gases formed reduce the iron ore to molten iron by removing the oxygen from the ore while the limestone picks up chemical impurities from the ore and coke and forms slag.

The blast furnaces operate continuously. At forty-five minute intervals molten slag is removed through a hole near the bottom of the furnace.

Every four to five hours, another hole, lower in the side of the furnace, is opened to allow the molten iron to flow out. The molten iron runs into huge ladles which transport it to the steelmaking furnaces or to the casting machines for molding into pigs for foundry use.

- A More than 500 ships load and unload some five million tons of materials at Algoma's docks during the eight month navigation season
- B Coke Oven "Push": Flaming coke is pushed out of oven into special rail transfer car, prior to quenching and screening for blast furnace use
- C Blast Furnace: This furnace towers over 100 feet in height. Raw materials are charged through the top
- D Blast Furnace "Cast": Molten iron flows through tapping hole in furnace, along runner in floor, to insulated ladle car which will transport it to the steel-making department or the pig casting machines
- E Charging Open Hearth: Overhead crane pours ladle of molten iron into open hearth furnace for refining into steel
- F Tapping Open Hearth: Molten steel flows from furnace into ladles





iron to steel

Algoma employs two methods to remove impurities from iron to produce steel.

THE OLDER METHOD—the giant open hearth requires over 10 hours to produce its largest yield of 360 tons of molten steel.

THE NEWER METHOD—the oxygen furnace requires less than one hour to yield over 100 tons of liquid steel. Algoma was among the first three North American steelworks to adopt this oxygen steelmaking method.

THE OLDER METHOD—THE OPEN HEARTH PROCESS: Open hearths are huge stationary furnaces each with a saucer-shaped bottom. They are charged with cold steel and iron, molten iron from the blast furnaces and fluxing materials. Flames from the combustion of oil, coke oven gas and pre-heated air sweep across the shallow hearth melting the materials and refining them into steel. Each "heat" or batch of steel takes from 10 to 12 hours to make. During that time



iron to steel



A Charging Oxygen Furnace: Furnace tilts to receive charge of steel scrap.

B Oxygen Furnace in Operation: Returned to upright position, oxygen under pressure is blown into furnace.

C "Teeming" the Steel: The ladle is carried by an overhead crane to a position above a row of ingot moulds and the steel is poured into the moulds through a nozzle in the bottom of the ladle.

D Soaking Pits: The steel ingot is heated to a uniform temperature throughout in gas and oil fired soaking pits.

E First Rolling: The bloom mill rolls, turning in opposite directions, form the huge ingot into blooms or slabs as required.

F Rolling Plate: The two slabbing rolls are replaced by a set of four high finishing rolls enabling the dual purpose bloom and plate mill to roll slabs into wide plate.



B

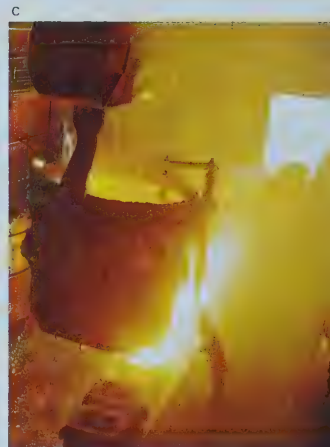
the "melter," supervising the operations of the furnace, takes many tests and is perhaps more exacting in his measurement of raw materials than the average housewife is in making a cake.

When the "heat" is complete, an explosive charge opens a tap hole in the back of the furnace and the steel flows into huge ladles.

THE NEWER METHOD—THE BASIC OXYGEN PROCESS: The basic oxygen steel-making furnace is a hollow pear shaped vessel open at the top. It sits in a cradle with an axle on either side so that it can be tilted through 360°. Algoma has three such furnaces. The same materials used in the open hearth process are charged into the oxygen furnace. An oxygen lance is lowered into the top of the furnace and high purity oxygen is introduced. Within seconds ignition takes place. The impurities are burned and the iron is refined into steel in approximately 45 minutes. As soon as samples show the steel is ready, the furnace is tipped and the steel pours into the waiting ladle.

POURING THE INGOT: Once the steel has left either the open hearth or the oxygen furnace, the first series of events in steel production—the refining of the metal—is complete.

An overhead crane picks up the ladle full of liquid steel, carries it to a platform where the steel is poured into waiting ingot moulds. When the steel hardens the moulds are removed and the ingot, which may weigh from five to thirty tons, is placed in a reheating furnace and brought to a uniform temperature for rolling.



D

rolling and shaping

REDUCING THE INGOT

PRIMARY MILLS: The ingot receives its first rolling in the primary bloom mills. These mills consist of large reversing rolls which roll and reduce the size of ingots down to blooms or slabs for further processing.

Algoma has two bloom mills—a 46" bloom and 122" plate mill and a 44" bloom mill.

46" BLOOM AND 122" PLATE MILL: This mill is unique in North America. It is capable of rolling 30 ton ingots into slabs for the production of plate, sheet and strip and, by changing rolls, reducing the slabs to wide plate for ships, bridges, welded pipe, tanks and buildings.

44" BLOOM MILL: The 44" bloom mill rolls ingots into blooms and slabs for the production of structurals, tube rounds and billets and flat rolled products under 30" wide.

25" BILLET MILL: Some blooms from the 44" mill are conveyed directly to the 25" continuous billet mill, consisting of six sets of horizontal rolls and two vertical edgers, where they are reduced in size and elongated. The steel is then suitable for further reduction and shaping in the bar and strip mill or the 18" merchant mill. Some products, tube rounds and billets, are finished for shipment on this mill.

SHAPING THE FINAL PRODUCT— THE FINISHING MILLS

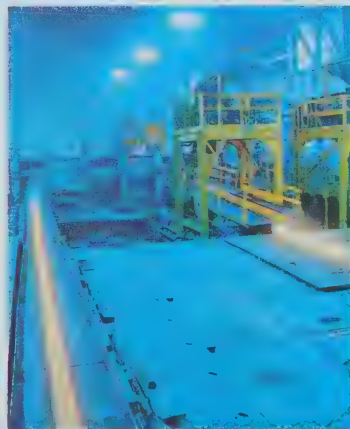
RAIL AND STRUCTURAL MILLS: The rail and structural department combines Algoma's oldest mill with one of its newest and most exciting. Both are fed with blooms from the 44" bloom mill.

On the older mill, now fully mechanized, rails and fastenings are produced as well as large (up to 18") structural shapes and tube rounds for the manufacture of seamless pipe for oil wells. The various shapes are achieved by changing the mill rolls which are grooved to form the steel into the desired shape.

In 1961, the fully automated parallel flange beam mill was added to this department. This mill, built completely in Canada, employs the most advanced mechanical and electrical equipment. It produces the only wide parallel flange structural beams in Canada which, until its completion, had to be imported. The products range in size from 6" x 6" to 24" x 12" and up to 190 pounds per foot in weight.

MERCHANT MILL: The merchant mill is another of Algoma's older finishing mills. This mill uses billets from the 25" billet mill. It has four sets of rolls standing side by side.

F



- A Wide Flange Beam Mill: Horizontal and vertical rolls in this fully automatic mill shape the bloom into a beam
- B Merchant Mill: Grooves in the rolls shape square billets into structural and bar shapes
- C Bar and Strip Mill: Set up as a continuous strip mill, each set of rolls successively elongates and reduces the thickness of the steel slabs
- D Cold Mill: Huge reversing rolls exerting pressures up to seven million pounds reduce the thickness of the steel without preheating

B

The billet passes back and forth between the rolls and is carried from one set to the next by mechanized tables. The final shapes range from square bars to T and Z bars, angles, beams and channels, in sizes ranging from 3" to 8" depending on the design of the grooves in the rolls.

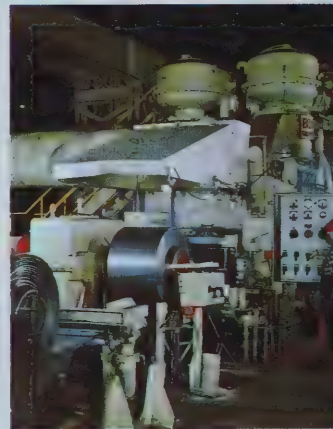
BAR AND STRIP MILL: The bar and strip mill was constructed in 1952 and was designed to do two distinct jobs.

As a bar producer, billets from the 25" billet mill are rolled into a variety of merchant bar products such as rounds, squares, flats, and angle shapes.

To roll strip or sheet steel, the six finishing stands are changed to stands equipped with flat surfaced rolls. The mill is then capable of rolling slabs from either the 46" or the 44" bloom mills into thin ribbons of steel up to 30 inches wide and one third of a mile long.

BALL MILL: Some quantities of the round bars produced by the bar and strip mill are sent to the ball mill where they are cut into short lengths and forged into round balls ranging from $\frac{1}{8}$ " to 4" in diameter which are shipped to mines for crushing and pulverizing ore.

COLD MILL: Some hot rolled sheet and strip is further processed in the cold mill where it is reduced in thickness, annealed and temper rolled to improve its properties. Cold rolled steel from this mill is used by manufacturers of refrigerators, washing machines, automobile bodies, furniture, electrical appliances and hundreds of similar items in daily use.



D

Algoma's wide hot strip mill

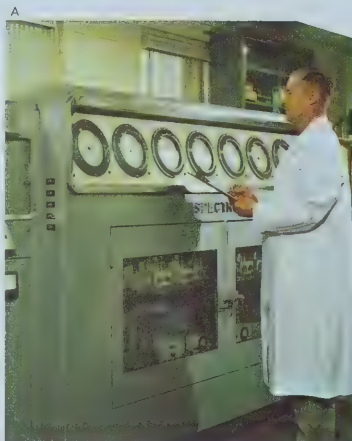
The 106" hot strip mill is making a major contribution to the economy of Canada. Prior to the start up of this mill, hot rolled steel strip of this width had to be imported. Provided with roughed slabs from the bloom and plate mill, the mill produces steel strip to 96" sheared width and from .049" to .500" thick in coils weighing up to 45,000 pounds.

Mechanical equipment, including mill stands, weighs over 10,000 tons. In all 58,000 h.p. is used to drive the mill. This horsepower is supplied by five 6,000 h.p. motors, one 5,000 h.p. motor and other auxiliary motors. The electrical equipment is the most modern available. For the first time in the steel industry, static controls are used instead of rotary equipment. This mill exemplifies Canadian craftsmanship. The mill itself and all components were manufactured in Canada.

Products from this mill are used by the building trades and the construction and fabrication industries, by the automotive, electrical and agricultural industries and for tank and rail car construction. Skelp from the mill is produced in size ranges for welded pipe from 10 to 30 inches.



many and varied services are required in steelworks operation



- A Laboratories: Metallurgist uses spectrometer to provide steelmakers with rapid and accurate analysis of steel samples
- B Maintenance: Skilled ironworkers change skip rail during repairs to a blast furnace
- C Utilities: Electrical power is distributed to all parts of the steelworks from a central control room
- D Machine Shop: Well equipped machine shops assist in the maintenance of Algoma's equipment.
- E Masonry: Relining an oxygen furnace is one of many jobs performed by Algoma's bricklayers and masons.
- F Accounting: Modern accounting machines provide rapid and detailed information concerning all phases of production and operations

QUALITY CONTROL AND RESEARCH

Quality control at Algoma is closely coordinated through all phases of steel production.

Rigid control is exercised over all incoming raw materials such as iron ores, coal, limestone, and alloying materials by highly trained samplers, chemists and analysts using the most up-to-date testing methods.

The chemical and testing laboratories operate round the clock analyzing samples taken at various stages in production. The analyses obtained provide a guide to the men in the blast furnaces, steelmaking division and mills in the strict adherence to predetermined specifications.

At every step of the operation, trained inspectors and testers ensure products will meet the most stringent of customers requirements and guard against variations in the physical and chemical properties.

Quality control at Algoma extends even into the customers' plants, where technical service metallurgists consult with customers on their production problems and the selection of the steel for specific uses.

A continuous research program is carried on at Algoma in the development of new steels for today's rapidly changing world. Algoma's processes of iron and steel manufacture are the subject of constant study.

ENGINEERING AND CONSTRUCTION

The engineering department is responsible for the design and construction of all plant facilities and for the administration of major construction and repair expenditures.



Records and detailed drawings of plant installations are maintained and changes in design of equipment are made as required.

MAINTENANCE

The maintenance department is responsible for maintaining and servicing all plant equipment and buildings. To keep Algoma's mills operating at peak condition, the department co-ordinates a great variety of skills and trades such as millwrights, pipefitters, riggers, sheeters, painters, electricians, draftsmen, engineers, electronic repairmen and others. Particular emphasis is placed on preventive maintenance programs for every operating department to minimize operational disruptions.

UTILITIES

The utilities department comprises steam and electrical generating plants and water pumping stations, and distributes blast furnace and coke oven gas as fuel to other departments and the turbines which create the air blast for the blast furnaces.

TRANSPORTATION

Movement of materials across the steelworks must be closely synchronized with the operation of each department. Facilities include a complete railway system equipped with 17 diesel locomotives on a 55 mile network of tracks as well as a fleet of trucks, hoists and carriers. To provide fast, efficient service, two-way radio connects the locomotives and trucks to a central dispatch station.



SHOPS AND FOUNDRIES

Repairs to plant equipment and the manufacture of many spare parts can be accomplished in Algoma's own machine shops. Most of the ingot moulds required in the steelmaking department are made in Algoma's foundries. An electrical repair shop services the thousands of motors that provide the power for mills, cranes, and other electrically driven equipment.

MASONRY

Algoma has its own masonry department to build and to rebuild and repair the brickwork in the coke ovens, blast furnaces, steel-making furnaces, and reheating furnaces.

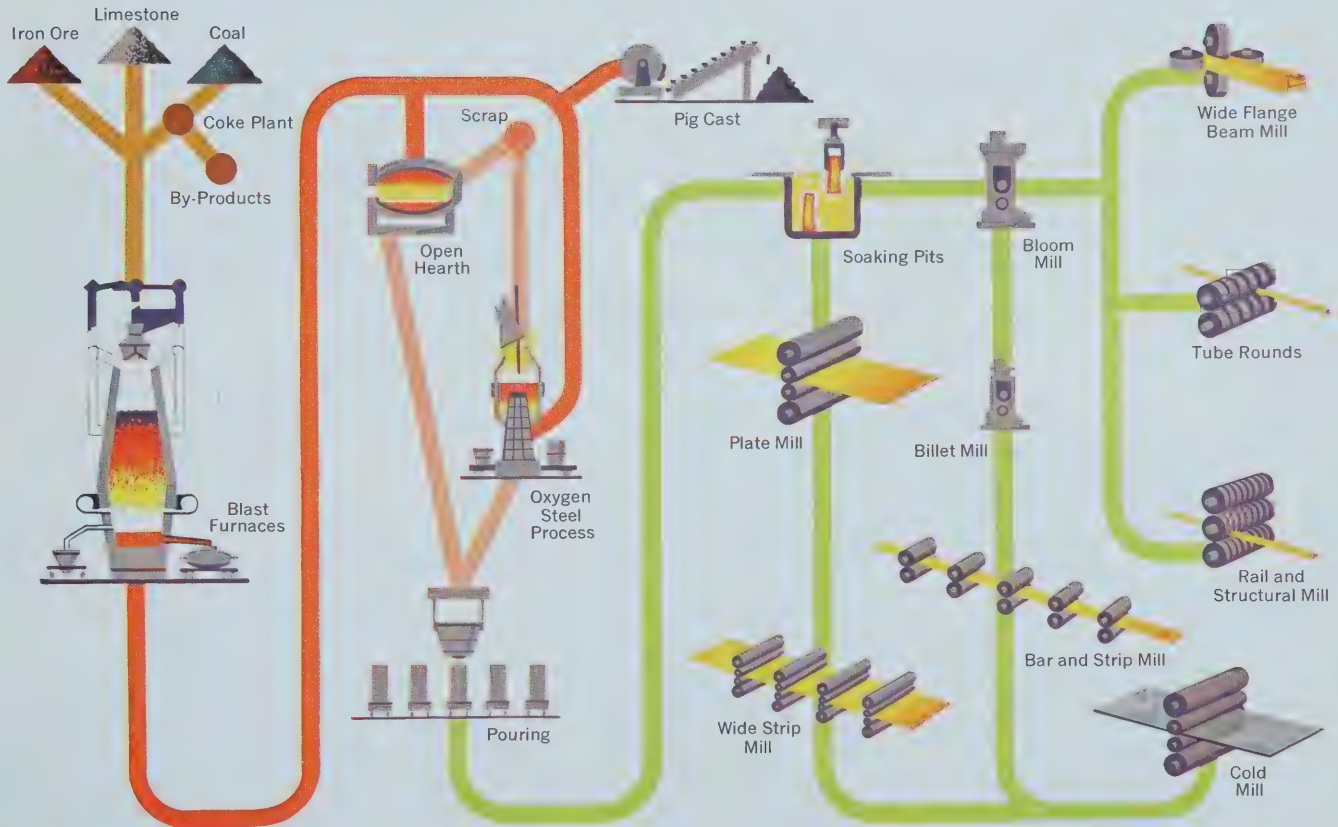
ADMINISTRATIVE SERVICES

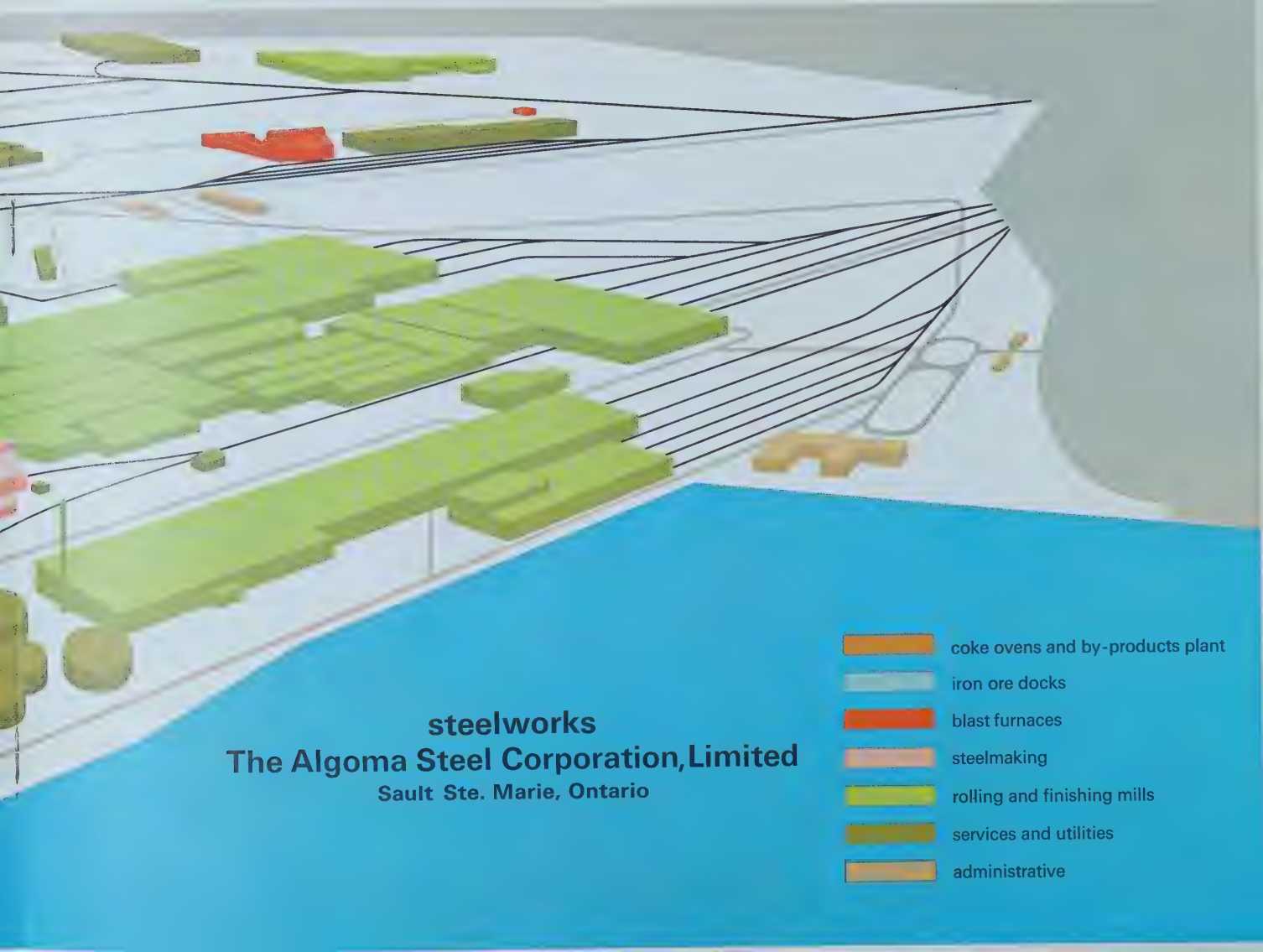
Behind all of the producing and servicing departments, a network of administrative and clerical personnel is necessary in staff departments which constitute sales, purchasing, traffic, industrial relations, industrial engineering, plant protection, production planning, and accounting.

The production and marketing of steel creates a great volume of accounting detail. Although modern accounting machines absorb the bulk of work, scores of men and women administer and co-ordinate records, accounts, and payrolls for the steelworks. The function of Algoma people in service and administrative departments has the same objective as those engaged in production departments—to deliver the best possible product to every Algoma customer.



steps in the steelmaking process





steelworks
The Algoma Steel Corporation, Limited
Sault Ste. Marie, Ontario

-  coke ovens and by-products plant
-  iron ore docks
-  blast furnaces
-  steelmaking
-  rolling and finishing mills
-  services and utilities
-  administrative



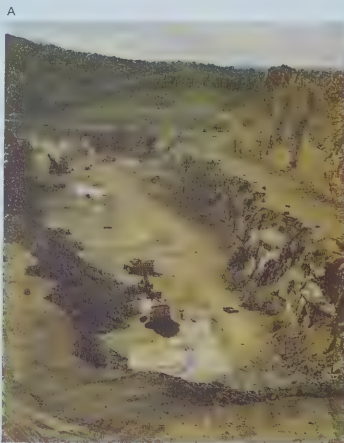
The Algoma Steel Corporation, Limited

periods of construction



BEYOND SAULT STE. MARIE:

The Algoma Steel Corporation divisions



- A **Open Pit Mine:** Iron ore deposits at the Sir James Mine occur near the surface permitting an open pit operation
- B **Underground Mine:** Headframe of George W. MacLeod mine services a 2,000 foot shaft which connects four levels in the underground ore body.
- C **Ropeway:** Starting 2,000 feet underground, ore is transported to the surface and three miles over rugged countryside to the sinter plant
- D **Sinter Plant:** The ore is crushed, beneficiated, sintered, and screened in this plant for shipment to the steelworks
- E **Shift Change:** Coal miners are transported into the Lady Dunn Mine by a special electric train
- F **Coal Preparation Plant:** Coal from the mine is washed and screened prior to shipment

Operations of The Algoma Steel Corporation, Limited spread well beyond the community of Sault Ste. Marie.

IRON ORE: ALGOMA ORE PROPERTIES

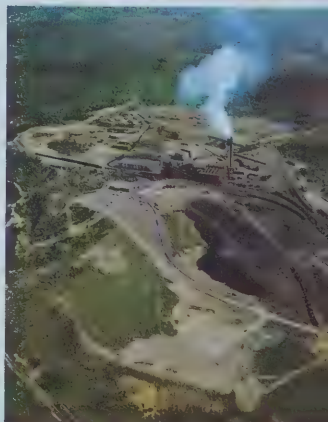
The producing mines, employing about 1000 men, are located on the Michipicoten Iron Range 150 miles north of Sault Ste. Marie. Hematite ore was discovered there in 1898 and the Helen Mine was opened. Mining was carried on from 1900 to 1918, when the high grade hematite of the Helen Mine was exhausted. Siderite ore was mined and roasted at the Magpie Mine which was opened in 1912. This mine operated until 1921.

In 1939, the Helen Mine was re-opened as an open pit, to mine siderite ore which was sintered to produce an acceptable blast furnace ore. The open pit was succeeded in the same area by the Helen Underground Mine and then by the George W. MacLeod Underground Mine (opened in 1960) which now supplies three quarters of the production.

The Sir James Mine, about three miles north east of the MacLeod Mine, was brought into production as an open pit in 1958. The mine supplies about one quarter of the production.

Ore from both mines is brought by aerial ropeway and rail to a sintering plant located three miles west of the MacLeod Mine. About three quarters of the ore is beneficiated by the heavy media sink float process and by cyclones for the removal of excess silica. The balance of the ore and the product from the beneficiating plant are then sintered, crushed and screened to give a uniformly sized material for blast furnace use.

Present annual capacity is 1,900,000 tons of sized sinter. Although most of it is moved by rail to the Steelworks, some tonnage is also shipped by lake vessels from Michipicoten Harbour to the other steel centres on the Great Lakes. Since 1939, almost 23 million tons of Algoma sinter have been produced.



COAL: CANNELTON COAL COMPANY

Coal for Algoma's coke ovens comes mainly from the Corporation's wholly-owned subsidiary, Cannelton Coal Company, West Virginia, which employs 700 men and comprises two properties: The Kanawha Division at Cannelton, and The Pocahontas Division at Superior in the southern part of the state. These divisions have coal land holdings of over 19,000 acres with sufficient proven reserves at the present rate of recovery for 70 more years.

The properties ideally complement each other in that the Kanawha coal is high volatile and that of Pocahontas low volatile. A blend of these two types consisting of about 75% high volatile and 25% low volatile coal produces coke of the quality suitable for the blast furnaces at Sault Ste. Marie.

Mining machines, loaders, and continuous mining assemblies which cut, drill, blast and load the coal into mine cars have replaced picks, mules and small cars. A modern preparation plant washes the coal by jig process, dries it in a centrifugal dryer and sizes it with vibrating screens.

The Kanawha property was acquired in 1910 when the first coke oven battery was built in the Sault. Three years later the Pocahontas property was leased. Recent modernization programs have effected substantial improvements in production costs and yielded coal of better and uniform quality for coking. Over the years, Cannelton has supplied the steelworks at Sault Ste. Marie with 50 million tons of coal.

PIG IRON: CANADIAN FURNACE

The Canadian Furnace Division operates one blast furnace at Port Colborne on Lake Erie. This plant employs approximately 200 men and produces the more specialized varieties of pig iron for iron foundries in Southern Ontario and is a valuable adjunct to the blast furnaces at Sault Ste. Marie.

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the measure of Algoma's growth

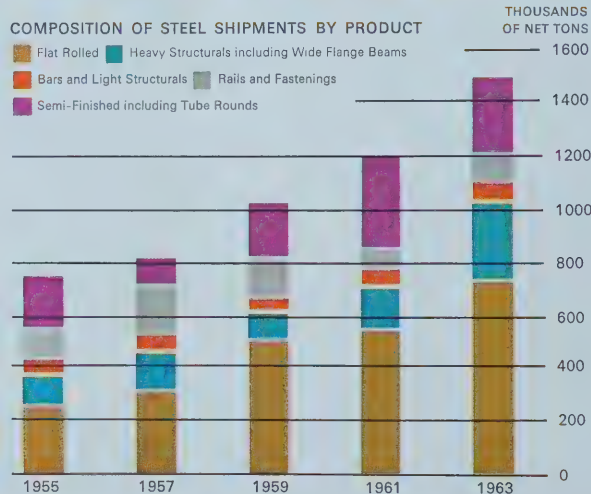
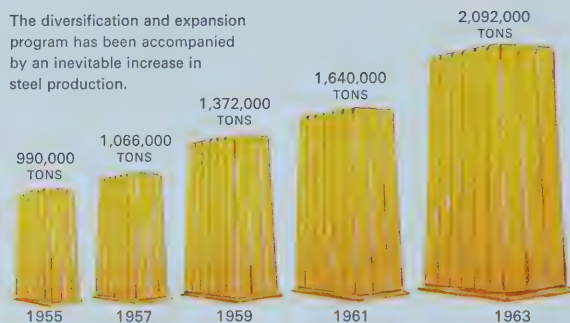
Before 1952, a large part of Algoma's sales was in coke, pig iron and semi-finished products for re-rolling in other mills. In finished products, major dependence rested on rails and fastenings for the railroads and a limited line of structural and bar products. Then, Algoma could compete with Canadian and foreign producers in product shapes which comprised only 25% of the steel used in Canada.

Since that time, Algoma's major growth has been concentrated in a drive for the diversification and expansion of its range of products, with emphasis on flat rolled products and wide flange beams not previously produced in Canada.

The program has required the investment of \$314,000,000 and has enabled Algoma to progress from the ability to compete for only 25% of the Canadian steel market in 1952 to 75% in 1965.

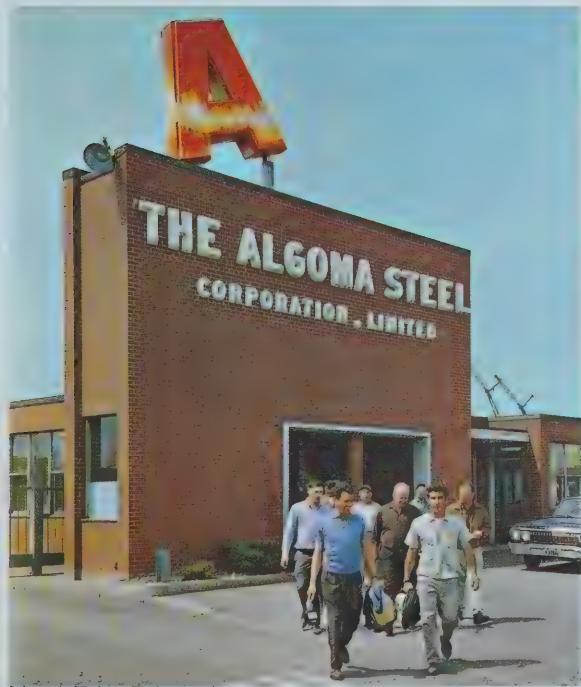
The two charts illustrate the effect this growth has had on Algoma's production of steel, and the changes that have taken place in the tonnages of steel products shipped.

The diversification and expansion program has been accompanied by an inevitable increase in steel production.



This chart best illustrates the rapid growth of flat rolled products which in 1963 represented 50% of steel shipments.

the people at Algoma



Over 18,000 people form Algoma. Of these, 8,500 who hold Algoma shares are the owners of the Corporation while 9,500 men and women are employed at the steelworks or one of the other three divisions.

Thousands of men have found a challenging career at Algoma. Their average length of service is well over 10 years and many have been with the company 25 years or more.

Opportunity awaits a young man at Algoma. Employees are given every encouragement to accept responsibility and advance themselves. The relatively low average age of supervisory and management groups demonstrates that many have done so.

Algoma offers special training programs in administrative as well as operational fields and many of its people take advantage of these to improve themselves and to prepare themselves for promotion. The training division also conducts regular training classes for electrical and maintenance personnel to improve their skills and ability and thus keep pace with changes and improvements in machinery and equipment. Algoma offers apprenticeships in many trades and in co-operation with the Ontario Department of Labour has developed an excellent training program which is now used as a model by other Ontario

industries. Some of the trades included in Algoma's training program are: ironworker, moulder, patternmaker, pipefitter, rigger, machinist, welder, automotive repairman, blacksmith, boiler maker, bricklayer, electrician, armature winder, roll turner, sheet metalworker and instrument repairman.

Algoma places the utmost emphasis on the safety of its employees from the moment they are hired. The safety program includes not only instruction to employees but continuous inspection of equipment, working conditions and work practices. While a well equipped plant medical centre is staffed with doctors and nurses to care for any injuries or sickness that may occur, the doctor's main concern is the maintenance of a high level of industrial hygiene.

The Ontario Workmen's Compensation provisions cover every Algoma employee for injury resulting from accident while at work. Off the job, he has the advantages of a group welfare plan. This plan provides life insurance, accident and sickness insurance and medical and surgical benefits. Pension plans provide for security after retirement.

Algoma employees form one of the larger industrial groups in Canada. Their loyalty, skill and experience have helped bring the company the success and high standing it now enjoys.



**Algoma's
home town
Sault Ste. Marie**



the origin... the modern community



THE ORIGIN: The words Sault Ste. Marie mean "The rapids of St. Mary's." Although Sault Ste. Marie is the oldest settled community in Ontario, its industrial development has taken place largely in the twentieth century. The history of "The Sault" begins in the days of Champlain, Father Marquette, Radisson and Grosiellers. The fur trade led to the establishment of a trading post by the North West Trading Company, in 1783. By 1797 the Company had constructed a small lock for the portaging of canoes and boats around the rapids. Except by water, there was no easy contact with the outside world until the Canadian Pacific Railway laid a branch line into the Sault in 1887. The following year, 1888, excavation began on the present ship canal which opened for traffic in 1895.

The growth of the Sault had begun. However, it was the establishment of industries in this area that significantly paced its development. In 1902, when Algoma's payroll was just 300 men, the area's population was 8,000. Reflecting the steelwork's growth to over 7,500 employees, the population of greater Sault Ste. Marie today exceeds 70,000.

THE MODERN COMMUNITY: Despite its rapid growth in recent years which has brought many advantages of the larger cities, Sault Ste. Marie enjoys the advantages of suburban or country life. Algoma Steel employees and their families may choose between city and suburban homes. Commuting is no problem, the steelworks being only a few minutes drive from most homes. Excellent sandy beaches and vacation spots lie within



a radius of 10 to 30 miles. Fishing streams and hunting grounds stand close at hand. Hundreds of summer cottages dot the shores of Lake Superior and many small inland lakes are within commuting distance of the city. The community is well provided with modern elementary and secondary schools, hospitals, recreational centres, health and welfare offices, churches and public buildings. There are excellent golf courses, parks and public beaches. The business district has a wide variety of modern stores, and shopping plazas serve the suburban areas.

The Lake Superior and Trans-Canada Highways as well as the St. Mary's River International Bridge joining the twin cities of Sault Ste. Marie, Michigan and Sault Ste. Marie, Ontario bring thousands of tourists to the area for whom there is an abundance of first class motels and hotels in and around the city.

In addition to passenger service provided by the Canadian Pacific Railway from the east, and the Algoma Central Railway from the north, the community has its own municipal airport some 12 miles from downtown. Several daily flights by Air Canada link the Sault to Eastern and Western Canada. While Algoma employs a large proportion of the working force, the Sault has other industries. Newsprint from its paper mills is world renowned. The lumbering industry employs many men both in the woods and in the mills. There are railway shops and yards, foundries, fabricating shops, and power generating plants as well as many smaller firms and businesses that supply essential services to a thriving community.



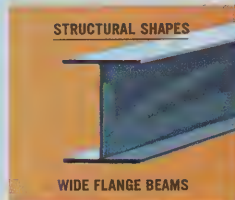
Algoma products



COKE



BLOOMS, BILLETS, SLABS

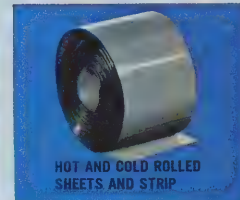


STRUCTURAL SHAPES

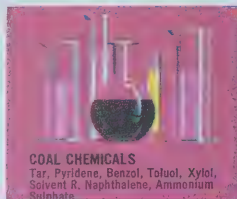
WIDE FLANGE BEAMS



ELEVATOR TEES

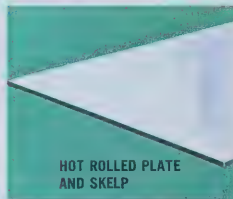


HOT AND COLD ROLLED
SHEETS AND STRIP



COAL CHEMICALS

Tar, Pyridene, Benzol, Toluol, Xylol,
Solvent R, Naphthalene, Ammonium
Sulphate



HOT ROLLED PLATE
AND SKELP



I BEAMS

H BEAMS



Z BARS



GRINDING BALLS AND RODS



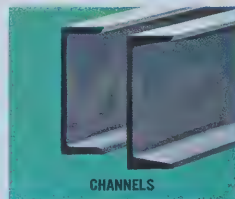
PIG IRON

Basic, Foundry, Malleable, Silvery,
Bessemer, Nodular



HOT ROLLED BARS

Rounds, Squares, Flats, Draft Keys
and Draw Bars



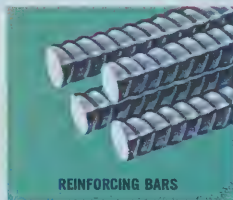
CHANNELS



RAILS AND FASTENINGS



INGOTS



REINFORCING BARS



ANGLES



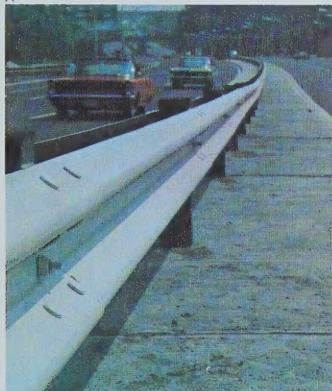
BEARING PILES

WHO BUYS STEEL? WHO USES STEEL?

There is one answer to both questions, and that answer is . . . you! Look about you. Everywhere you look there is steel. It has become part of your life. Steel is used in buildings, bridges, construction equipment, mines, shipbuilding, automobiles, household appliances and other consumer products.

In addition to Canadian markets, Algoma has sold products in North and South America, Australia and to many countries in Europe and Asia.

uses of steel



D

quick facts about Algoma

More than 450 different specifications of steel are produced at Algoma.

The development of high-strength steels for the construction industry has been paced by Algoma.

Steel from Algoma has been shipped to every continent of the world.

Algoma's 253 coke ovens are the largest installation in Canada, capable of producing over 1½ million tons of coke annually.

Four blast furnaces at Algoma are capable of producing over two million tons of iron annually.

The yearly steel production yield from Algoma furnaces is 2,200,000 net tons. If this amount of steel were converted into an 8' wide strip, 1/10" thick, in Algoma's wide strip mill, it would completely encircle the world at the equator.

The combination 46" bloom and 122" plate mill at Algoma is the first of its kind in North America. It is capable of rolling ingots into blooms or slabs and by changing rolls, rolling the slabs into wide plate.

The first automatic wide flange beam mill in the world is at Algoma . . . producing wide flange beams in Canada for the first time.

More than 175,000,000 gallons of water are pumped through the plant daily to cool Algoma's furnaces and equipment.

A complete 55 mile railway system operates within the steelworks employing 17 diesel locomotives and over 500 railway cars.

Algoma's entire fleet of diesel locomotives, trucks and carriers are equipped with two-way radios.

Each year, Algoma provides six, four-year scholarships for promising students of communities where its operations are located. In addition, Algoma gives support to Canadian university building programs.

Technical institute bursaries are provided by Algoma, for promising students seeking a technological education.

Algoma provides summer employment for as many as 400 students each year.

Over 500 boats load and unload some five million tons of material over Algoma Steel docks during each season of navigation, helping to make Sault Ste. Marie one of Canada's busiest inland ports.

To heat the many furnaces in the plant, over 60,000 gallons of fuel oil are used every day.

Algoma spends between \$5-6 million every month in Sault Ste. Marie in payment for goods and services.

Algoma is rated eleventh largest steelworks in North America—second largest in Canada—and is one of the most modern and diversified steelmaking operations on the continent.

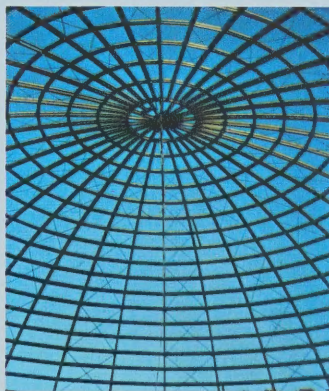
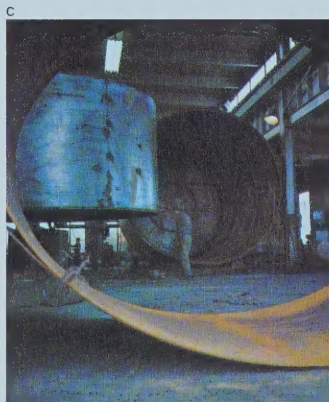
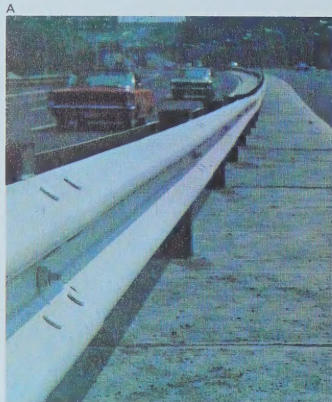
Well over a million and a half dollars is paid each year in municipal taxes helping to maintain such essential community services as fire and police protection, schools, streets, and parks.

Algoma's huge industrial payroll of nearly \$50 million annually contributes to the growth and development of the Greater Sault Ste. Marie area.

Algoma's vast steelworks operation covers a fenced-in area of approximately one square mile. It has adjacent property of 2,200 acres, allowing plenty of "elbow room" for future expansion.

A 33-minute coloured motion picture, "Adventure in Steel," describing Algoma's iron and steelmaking processes is available on loan from the Community Relations Office of The Algoma Steel Corporation, Limited

uses of steel



A
Algoma steels are used to produce life protecting guard rails and drainage culverts.

B
Because the modern automobile is a hard-working piece of machinery, Algoma steels are selected for numerous components.

C
Producers of storage tanks and tubes look to Algoma for steels that are precisely right for the job.

D
Kitchen magic stems from Algoma rolled steels that provide the proper surface for chrome or paint finishes.

E
Business-like steel office furniture is not only functional but good looking and sturdy. Algoma Steel is used by leading furniture manufacturers.

F
The roof dome for the Pacific National Exhibition's new Agrodome Building is a light-weight steel structure that is architecturally pleasing... economical, too.

G
Algoma Plate is used extensively in shipbuilding. Sheared plate up to 115" wide is available in a wide range of carbon and alloy specifications for shipbuilding and many other areas of industry.

H
Algoma plate used in the giant girders of the new Homer Bridge is just one example of its many applications.

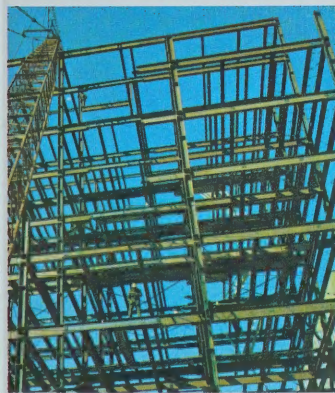
J
When this 11-storey office building, Toronto was built no less than 14% was saved on the total construction cost by using high-strength, light-weight Algoma-44 steel.

K
Algoma is a major supplier of steel. Algoma reinforcing bars put muscles in the "Mighty Mac"... the renowned Mackinac Bridge.

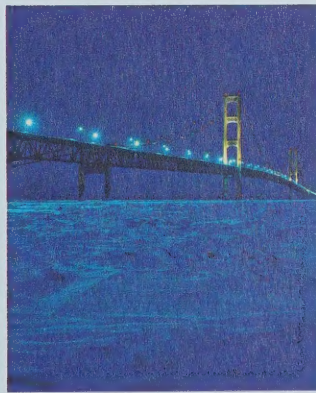
G



H



J



K

WORKS AND OPERATIONS

Steelworks Division

Sault Ste. Marie, Ontario

Canadian Furnace Division

Port Colborne, Ontario

Algoma Ore Properties Division

Michipicoten District, Ontario

Cannelton Coal Company

Cannelton, West Virginia

EXECUTIVE OFFICES

Sault Ste. Marie, Ontario

SALES OFFICES

Sault Ste. Marie, Ontario

Bank of Montreal Building

Toronto, Ontario

Canada Building

Windsor, Ontario

Royal Bank Building

Hamilton, Ontario

Royal Bank of Canada Building

Place Ville Marie

Montreal, Quebec

Great West Life Building

Winnipeg, Manitoba

Bank of Canada Building

Saint John, New Brunswick

Burrard Building

Vancouver, British Columbia



THE **ALGOMA STEEL** CORPORATION, LIMITED